The new sites would slightly reduce long-term impacts from dispersed recreation in the western portion of the NCA; however, the proposed sites may not be adequate to address increased recreation use associated with projected population increases.

Surface Disturbing Activities: Impacts of limiting or eliminating surface disturbing activities would be the same as described in Alternative A. Impacts associated with the continued use of the 16 active mineral material sites would be as described in Alternative A, but would occur only at the local level.

Transportation Management Activities: Beneficial impacts to vegetation associated with areas closed to motorized vehicles would be the same as Alternative A except that there would be a larger area closed to motorized vehicle use. Application of the route designation criteria would have the same impacts as Alternative A.

Vegetation – Fire Suppression Activities: Impacts would be as described in Alternative A.

Vegetation – Fuels Management Activities: Approximately 14% (70,000 acres) of the NCA would be treated for hazardous fuels reduction. The majority of Management Areas 1 and 2 would be treated resulting in slight short-term local adverse impacts and moderate long-term beneficial impacts at the landscape level. Fuel breaks would result in moderate long-term benefits at the landscape level. Although the hazardous fuels treatments would act as a substantial protection of remnant perennial communities and restoration area, up to 30,000 acres of shrub communities could still be lost.

Vegetation – Noxious Weeds Management Activities: The level of treatment would be slightly to moderately beneficial in Management Areas 1 and 2 over the long-term; however, noxious weeds could increase at the local level and potentially at the landscape level in Management Area 3.

Vegetation – Research Areas: As a result of up to 1000 acres being utilized for research, slight short-term adverse impacts would occur at the local level. Slight to moderate long-term beneficial impacts would occur at the local, and possibly landscape level.

Vegetation – Restoration Activities: Focusing restoration projects in Management Area 1 (outside the OTA) and portions of Management Area 2 (14% of the NCA) would result in slight short-term adverse impacts at the local level and moderate long-term benefits in restored areas and adjacent perennial communities at the landscape level. While an estimated 30,000 acres of shrubs may be lost to wildfire, the proposed restoration efforts would result in a net gain of 20,000 acres of shrub cover over the long-term.

Visual Resources Management Activities: Class III and IV designations would provide slight protection from surface disturbance landscape-wide and would not have an impact on vegetation.

Conclusion – Upland Vegetation – Alternative B

Individually, areas closed to motorized vehicle use, and restrictions on surface disturbing activities and livestock grazing in Sandberg bluegrass communities, and consolidating land ownership would provide slight to moderate localized benefits over the long-term; however, combined the impacts would be slight at the landscape level. Vegetation treatments and research areas could have slight adverse localized impacts in the short-term, but would have moderate long-term benefits at the landscape level. Fire suppression priorities could moderately benefit shrub communities and could adversely affect annual communities slightly at the landscape level. Implementation of S&Gs and application of the route designation criteria would provide slight to moderate long-term benefits at the landscape level.
Surface disturbing activities and development of recreation facilities could have slight to moderate short- and long-term localized adverse impacts. IDARNG off-road training,

utility development, livestock grazing in annual communities, visual resources classifications, and inadequate recreation facilities and weeds treatments would have slight to moderate short- and long-term adverse impacts at the landscape scale. Overall, there would be a slight landscape-wide net increase (20,000 acres) in shrub communities, and degraded communities would occur primarily in Management Area 3 and non-shrub portions of the OTA. Under this alternative, continued off-road maneuvers and live firing would preclude BLM from restoring 80,000 acres of degraded non-shrub habitat in the OTA. The objective would be met. The DFC would be met except for the Impact Area and designated off-road Maneuver Areas of the OTA and in Management Area 3 where shrub communities would not increase.

Upland Vegetation: Alternative C

Idaho Army National Guard Activities: Restricting off-road maneuver training to three designated routes in the Bravo Area (Management Area 1) would moderately benefit shrub and grass communities at the local level for the short-and long-term. Shrub communities in the Bravo Area could expand over the long-term into grass-dominated areas. Approximately 80% of the training in the Bravo Area would be redistributed to the other maneuver areas. Impacts to grassland communities would be greater in these areas than in Alternatives A and B. The benefit of mandatory avoidance of shrub communities in the remainder of the OTA would be as described in Alternative B. Removal of 3,900 acres of slickspot peppergrass habitat from the OTA would have no impact on upland vegetation. The impact of other training activities would be as described in Alternative A. Under this alternative, continued off-road maneuvers and live firing would preclude BLM from restoring 80,000 acres of degraded non-shrub habitat in the OTA.

Lands and Realty Activities: The effects of land purchases and exchanges on upland vegetation would have a moderate long-term benefit at the landscape level. The proposed change in the NCA boundary would result in a net loss of approximately 2,100 acres of degraded or disturbed habitat that would no longer be part of the NCA restoration priorities, which would result in little or no impact to the NCA. A 163,600-acre avoidance area would have slight beneficial long-term landscape-wide effects on upland vegetation by limiting ground disturbance associated with major utility developments. A utility corridor would have slight to moderate long-term adverse impacts at the local level.

Livestock Grazing Management Activities: Removing all livestock grazing, except for fuels management projects, would result in moderate to high landscape-wide long-term benefits for perennial communities and slight benefits for annual communities. The loss of short-term beneficial impacts associated with livestock grazing would be negligible, because restoration and rehabilitation projects would increase. Using livestock grazing as a tool to reduce hazardous fuels would have the same impacts on upland vegetation as Alternative B.

Recreation Management Activities: Impacts of limiting campfires would be the same as described in Alternative B. Impacts associated with the proposed Three Pole and Initial Point sites would be as described in Alternative B. Shrub and annual grass communities dominate in the vicinity of the proposed Celebration Park Annex and Guffey Butte sites. Increased recreation use and the potential for increased fire starts could have slight long-term adverse impacts to vegetation in the vicinity of these sites. The proposed sites would help reduce some long-term impacts from dispersed recreation in the western portion of the NCA and would more adequately address increased recreation use associated with projected population increases than Alternative B. The net results would be slightly beneficial at the landscape level.

Surface Disturbing Activities: The impacts of limiting or eliminating surface disturbing activities would be the same as described in Alternative A. Impacts associated with the con-

tinued use of the 16 active mineral material sites would be as described in Alternative A, but would occur only at the local level.

Transportation Management Activities: The beneficial impacts to vegetation associated with area closures (approximately 13,200 acres) would be the same as Alternative A except that there would be a larger area closed to motorized vehicle use. The application of the route designation criteria would have the same impacts as Alternative A.

Vegetation – Fire Suppression Activities: Impacts would be as described in Alternative A.

Vegetation – Fuels Management Activities: Approximately 20% (100,000 acres) of the NCA would be treated for hazardous fuels reduction. The majority of the NCA outside of restored and remnant shrub communities would be treated resulting in moderate short-term local adverse impacts and long-term highly beneficial impacts at the landscape level. Fuel breaks would result in moderate long-term benefits at the landscape level. The hazardous fuels treatments would act as a substantial protection of remnant perennial communities and restoration areas and would limit the loss of shrub communities to no more than 15,000 acres.

Vegetation – Noxious Weeds Management Activities: The types of impacts to vegetation from weed treatments would be the same as described in Alternative A; however, they would occur at a greater scale than either Alternative A or B. Because of the extensive level of soil disturbance associated with vegetation treatments, there could be a high potential for noxious weed infestation that may exceed the level of treatment proposed (4,000 acres). Should this happen, over the long-term there could be moderate to high adverse impacts at the local level. Long-term improvements in rangeland and habitat condition resulting from habitat restoration and fuels treatments would increase resistance to weed infestations, ultimately reducing the overall area susceptible to infestation.

Vegetation – Research Areas: Although a larger area would be subject to research activities, the impacts would be the same as Alternative B.

Vegetation – Restoration Activities: All high priority areas and an additional 102,000 of degraded habitat outside the OTA (approximately 63% of degraded habitats) would be restored. Restoration of shrubs in perennial grass communities would occur on up to 47,000 acres resulting in minimal long-term landscape-wide adverse impacts to existing perennial vegetation. In the remaining areas that are being fully restored, short-term impacts to existing perennial vegetation would occur over a greater area than Alternatives A and B. While an estimated 15,000 acres of shrubs may be lost to wildfire, the proposed restoration efforts would result in a net gain of 115,000 acres of shrub cover over the long-term.

Visual Resources Management Activities: Slight long-term beneficial impacts from Class II designations would occur primarily at the landscape level (approximately 39%). Class III and IV designations would provide slight protection from surface disturbance landscape wide and would not have an impact on vegetation.

Conclusion – Upland Vegetation – Alternative C

Individually, areas closed to motorized vehicles, restrictions on surface disturbing activities, and consolidating land ownership would provide slight to moderate localized benefits over the long-term. Vegetation treatments and research areas could have slight adverse localized impacts in the short-term, but would be highly beneficial over the long-term at the landscape level. Fire suppression priorities could moderately benefit shrub communities at the landscape level and could adversely affect annual communities slightly at the local level. Application of the route designation criteria and protection afforded by the VRM Class II designation would provide slight to moderate long-term benefits at the landscape

level. Removal of livestock would be highly beneficial to perennial communities and slightly beneficial to annual communities over the long-term at the landscape level. Surface disturbing activities, development of recreation sites and utilities could have slight to moderate short- and long-term localized adverse impacts. IDARNG off-road training would have slight to moderate long-term adverse impacts in the OTA. Overall, there would be a substantial landscape wide net increase (115,000 acres) in shrub communities. Degraded communities would occur primarily in non-shrub portions of the OTA. Under this alternative, continued off-road maneuvers and live firing would preclude BLM from restoring 80,000 acres of degraded non-shrub habitat in the OTA. The objective would be met. All DFC would be met except in the Impact Area and designated off-road Maneuver Areas of the OTA.

Upland Vegetation: Alternative D

Idaho Army National Guard Activities: Impacts in the Bravo Area would be the same as described in Alternative B. Approximately 50% of the training in the Bravo Area would be redistributed to the other areas; however, the expansion area would only be 4,100 acres, thus impacts to grassland communities would be greater in these areas than in Alternative A or B. The benefit of mandatory avoidance of shrub communities in the remainder of the OTA would be as described in Alternative B. Shrub and perennial grass communities account for approximately 16% of the proposed expansion area. Impacts in the expansion area would be the same as Alternative B, but would only occur on 4,100 acres. The impact of other training activities would be as described in Alternative A. Under this alternative, continued off-road maneuvers and live firing would preclude BLM from restoring 80,000 acres of degraded non-shrub habitat in the OTA.

Lands and Realty Activities: The impacts on upland vegetation from acquisitions and consolidating public ownership would be the same as described in Alternative C. The proposed change in the NCA boundary would result in a net decrease of approximately 2,100 acres of degraded or disturbed habitat that would not be treated which would have no impact. The effects of the proposed avoidance area and use and maintenance of the existing utility corridor would be as described in alternative A.

Livestock Grazing Management Activities: Impacts to upland vegetation resulting from livestock grazing in perennial communities outside the Impact Area would be as described in Alternative B. Limiting livestock grazing in annual grasslands to leave minimum amounts of residual litter would have the same affect as Alternative A.

Recreation Management Activities: Impacts to vegetation from restricting campfires would be the same as described in Alternative B. Impacts associated with the four recreation sites would be the same as Alternatives C. Annual grass and invasive weed communities dominate in the vicinity of the proposed Black Butte Boat Access site. Short-term impacts to vegetation would be slight, but increased recreation use could impede long-term restoration efforts in the vicinity of this site. The potential for reducing impacts to upland vegetation from dispersed recreation would be the same as Alternative C. The additional site, located adjacent to the Snake River, would slightly benefit uses associated with riparian areas rather than uplands over the long-term at the landscape-level.

Surface Disturbing Activities: The impacts of actions common to all alternatives that limit or eliminate surface disturbing activities would be the same as described in Alternative A. Impact associated with the use of existing mineral material sites and reopening inactive sites would be as described in Alternative A.

Transportation Management Activities: The impacts related to closing 4,400 acres to motorized vehicle use would be the same as Alternative A. Although the closed area would be larger, the impacts would continue to be recognized at the local level. Impacts from

application of the route designation criteria would be as described in Alternative A.

Vegetation – Fire Suppression Activities: Impacts would be as described in Alternative A.

Vegetation – Fuels Management Activities: The impacts associated with fuels management would be the same as described in Alternative C; however, the increased level of human use and associated greater probability of human-caused fires would result in a loss of up to 30,000 acres of remnant shrub communities.

Vegetation – Noxious Weeds Management Activities: Impacts would be the same as described in Alternative C.

Vegetation – Research Areas: Although a larger area would be subject to research activities, the impacts would be the same as Alternative B.

Vegetation – Restoration Activities: Impacts to upland vegetation related to restoration would be the same as those described in Alternative C with the exception of the net gain of shrub communities over the long-term. While an estimated 30,000 acres of shrubs may be lost to wildfire, the proposed restoration efforts would result in a net gain of 100,000 acres of shrub cover over the long-term.

Visual Resources Management Activities: Slight long-term beneficial impacts from Class II designations would occur primarily at the local level (approximately 11%). Class III and IV designations would provide slight protection from surface disturbance landscape wide and would not have an impact on vegetation.

Conclusion – Upland Vegetation – Alternative D

Individually, areas closed to motorized vehicles, restrictions on surface disturbing activities and livestock grazing in Sandberg bluegrass communities, and consolidating land ownership would provide slight to moderate localized benefits over the long-term. Vegetation treatments and research areas could have slight adverse localized impacts in the short-term, but would be highly beneficial over the long-term at the landscape level. Fire suppression priorities could moderately benefit shrub communities at the landscape level and could adversely affect annual communities slightly at the local level. Implementing S&Gs, application of the route designation criteria, and protection afforded by visual resources classifications (Class II) would provide slight to moderate benefits at the landscape level. Surface disturbing activities including development of recreation sites could have slight to moderate localized adverse impacts.

IDARNG off-road training in non-shrub communities would have slight to moderate adverse impactsin the OTA Continued off-road maneuvers and live firing would preclude BLM from restoring 80,000 acres of degraded non-shrub habitat in the OTA. The objective would be met. All DFC would be met except in the Impact Area and designated off-road Maneuver Areas of the OTA.

4.2.9 Water Quality, Riparian and Wetlands

Summary

Alternative A would provide the least amount of restoration. Alternative B provides an increased level of restoration over Alternative A. Alternatives C and D provide a significant amount of protection and restoration; however, Alternative C provides the greatest protection from utility development and livestock grazing.

Assumptions

- Riparian areas are dynamic systems that undergo natural changes frequently.
- Habitat restoration projects in riparian areas would experience degrees of success or failure. Successful projects would have beneficial impacts to water quality and riparian resources. Failures would have no long-term impact on these resources.

- Varieties of shrubs used for upland habitat restoration projects would not invade riparian areas.
- Short-term impact would be 5 years or less based on the average rate of recovery for riparian areas. Long-term impact would be greater than five years.

How Activities Affect Water Quality, Riparian and Wetlands

Direct Impacts

Livestock Grazing Management Activities

- Riparian areas can be affected by grazing in different ways depending on the season of use. Grazing these areas during the summer would generally have adverse impacts on riparian areas (Baker, *et al.* 2001 p 3). When temperatures are high and there is a lack of shade in the uplands, livestock tend to congregate in riparian areas and utilize riparian forage. This impacts riparian areas adversely in several ways. Surface disturbance and soil compaction is increased where livestock congregate, resulting in bank instability. In addition, riparian vegetation that is utilized by livestock for forage in the summer may not have enough growing days left in the year for recovery and reproduction. In the late summer and fall, livestock tend to be drawn to riparian areas for shade and forage. During the fall season, riparian areas may offer more palatable forage for livestock than the uplands, which may be depleted.
- Grazing earlier in the growing season (i.e., spring) allows riparian vegetation more time to recover than either summer or fall grazing and can actually improve vegetation growth in riparian areas if carefully monitored. Grazing riparian areas in the spring has been shown to be helpful in establishing woody plants (New Mexico Department of Game and Fish 2004 p 2, Baker, *et al.* 2001 p 4). Winter grazing has the least overall impact to riparian areas (USDI 1997, p 27). However, long-term use of riparian areas in the winter could lead to a decline of palatable native species.
- Degraded riparian systems are less able to withstand the disturbance of grazing than those in PFC. Grazing degraded riparian systems could directly reduce the functioning condition of the riparian area. Further indirect adverse impacts on water quality would result by reducing the ability of the system to withstand a high runoff event without erosion or stream channel alteration.
- Management actions that restrict or eliminate livestock use in riparian areas (i.e. implementation of Idaho S&Gs, limiting impacts to Idaho springsnail habitat, grazing closures) would have beneficial direct and indirect impacts on riparian and water quality resources over the long-term. Limiting or eliminating livestock use of riparian vegetation would help promote healthy riparian vegetation that directly benefits riparian areas and water quality by stabilizing streambanks and filtering sediment from overland flow before it enters water bodies (Bellows 2003 p 3).

Riparian/Wetland Management Activities

- Maintaining riparian and wetland areas that are in PFC would ensure that desirable riparian vegetation would occur in a diverse mixture and exhibit appropriate vigor, growth and reproduction relative to the landform, geology, and hydrology of the site. The sites would be relatively stable even during typical flood flows (high flows reached every 5 to 30 years) and would resist the establishment of noxious and invasive species over the short- and long-term.

Surface Disturbing Activities (Lands and Realty, Mineral Materials, Recreation)

- Surface disturbing activities that take place in riparian areas, including activities in utility corridors, would result in various degrees of disturbance. The removal of vegetation would increase the potential for erosion and sedimentation resulting in short and long-term adverse impacts.

Avoidance areas would prevent major rights-of-ways and the resulting adverse impacts to riparian areas.

- The short-term direct impacts of surface disturbing activities (i.e. recreation, motorized vehicle use) include crushing and destroying riparian vegetation. Repeated localized impacts can limit the ability of plants to reestablish by reducing their numbers and reproductive capability. Areas where plants are eliminated could become functioning at risk over the short-term. Increased sedimentation from erosion could indirectly impact water quality over the short- and long-term. Invasive and noxious weeds that become established in disturbed areas may spread into adjacent areas resulting in increased competition for resources over the short- and long-term, further impacting riparian communities.
- Riparian areas receive a disproportionately high level of recreational use relative to their occurrence in the NCA. Direct impacts to vegetation from recreation use include trampling and destroying vegetation caused by foot and vehicle use, firewood gathering, and loss of vegetation caused by escaped campfires. Invasive and noxious weeds could become established in disturbed areas. Functioning condition and water quality could be impacted over the short- and long-term as described above. The direct impacts could be less apparent where hardened use areas have been established. Actions that actively manage or limit use (i.e. creating recreational facilities such as trails or hardened use areas, limiting outfitter permits) would help limit impacts over the short- and long-term.
- In areas where scenic and biological values increase (i.e. riparian areas are in PFC) over time, they become more attractive to recreationists and use levels and associated impacts could increase over the long-term.

Transportation Management Activities

- Motorized vehicles directly impact riparian vegetation in the short-term by crushing and shearing plants. Repeated disturbances would alter species composition by reducing desirable species and allowing undesirable species to become established and increase. Over the long-term, riparian functioning condition could decline.
- Water quality could be adversely impacted as bare ground is exposed and erosion increases sediment input into water sources or shade is decreased resulting in increased water temperatures. Elimination of motorized vehicle use and associated impacts would help areas attain and maintain PFC and water quality over the long-term. Limiting access could also reduce dispersed recreation use and the impacts associated with that use.

Water Quality/Riparian Wetland Restoration Activities

- Re-establishing native trees and shrubs would benefit riparian areas and water quality over the long-term. Replacing exotic species with native species would not necessarily alter or improve the physical functioning condition of riparian areas, but it would improve the biological habitat quality over the long-term. Established woody species would protect stream banks from erosion, provide shade, and improve water quality (Hoag 1998, p 5). Over the long-term, native species would provide woody debris to the Snake River system as they mature and die.
- Weed species commonly found in the NCA (perennial pepperweed, poison hemlock, whitetop, Russian knapweed, Canada thistle, Serbian pea-shrub, etc.) generally lack the root masses capable of withstanding high-flow events, resulting in a relatively unstable streambanks or shoreline. As weed species are replaced with deeper-rooted desirable species, functioning condition would be improved over the short- and long-term. Riparian systems benefit indirectly from a diverse composition of hydric species over the long-term because they exhibit increased resiliency to disturbance events such as flooding, grazing, or fire. Diverse species composi-

tion is necessary for maintenance and recovery in riparian systems following such disturbance events. Areas treated for noxious weeds would be more resistant to the establishment and spread of noxious weeds as the vigor and productivity of desirable species increases. Eliminating a source of noxious weeds in the TWMA would benefit the TWMA and the Snake River over the short- and long-term. Soil microorganisms would be expected to thrive over the short through long-terms as nutrients are freed into the soil horizon and increased solar energy invigorates plant life.

- Restoration of the TWMA wetlands would have direct beneficial impacts to the functioning condition of the wetland and its associated water quality over the long-term. The introduction of prescribed fire on a cyclical basis could improve the vigor of decadent wetland plant communities over the long-term by eliminating dense mats of dead and dying perennial wetland vegetation. This would improve nutrient cycling and nutrient absorption by wetland obligate plant species and in turn, improve water quality within the wetland (Pappani and Inouye 2003, Tarter, A. 2005 Pers. Comm.). Burning portions of the TWMA would give desirable species a competitive advantage over the short- and long-term by removing noxious weeds that are not adapted to fire. The short-term loss of structural and functional components could adversely impact water quality. The removal of vegetation would increase the potential for erosion and sedimentation of adjacent ponds and the Snake River. The relatively rapid return of vegetation would help stabilize the soil surface and decrease the potential for erosion and sedimentation over the short- and long-term.

Indirect Impacts

Livestock Grazing Management Activities

- Livestock can be vectors of noxious weeds in riparian areas. The presence of a disturbed soil surface and noxious weed seeds in riparian areas could lead to an increase in noxious weeds. Riparian area PFC could be adversely impacted where livestock create soil disturbance, transport noxious weed seeds into a riparian area, and those seeds germinate.
- Grazing livestock riparian areas could have adverse impacts to riparian area functioning condition and water quality by altering vegetative composition and the subsequent streambank destabilization.
- Adverse impacts to riparian areas could result from grazing practices in the adjacent uplands that do not leave enough residual vegetation for proper watershed function.
- Grazing practices in the uplands that continually reduce standing vegetation and litter can have adverse impacts to the stability of uplands by limiting the quantity of organic matter available for incorporation into the soil. Reductions in upland standing vegetation, litter, and soil organic matter content can increase the potential for non-point impacts to water quality by decreasing the ability of water to infiltrate the soil and encouraging more runoff (National Research Council 1994, p 102).
- Management actions that reduce or eliminate livestock use in riparian areas would have beneficial direct and indirect impacts on riparian and water quality resources over the long-term. Limiting or eliminating livestock use of riparian vegetation would help promote healthy riparian vegetation that directly benefits riparian areas and water quality by stabilizing streambanks and filtering sediment from overland flow before it enters water bodies (Bellows 2003 p 3).
- Management actions that improve watershed conditions in adjacent uplands (i.e. implementing Idaho S&Gs, leaving minimum amounts of residual litter in annual grass pastures) could reduce sediment input into riparian and aquatic systems and would benefit water quality over the short- and long-term.

Riparian/Wetland Management Activities

- Improving 'functioning at risk areas' in the NCA would primarily involve replacing less desirable plant species or noxious weeds with desirable plant communities. Methods used to eradicate undesirable species could directly impact desirable species in the short-term. Removal of vegetative cover could make stream banks in flowing water (lotic) systems more susceptible to erosion over the short-term. This potential increase in sedimentation also represents an indirect adverse impact to water quality. As desirable species become established in treated areas, stream banks would be stabilized by roots and woody debris over the short- to long-term. Wetland and riparian areas would be more resilient to the establishment of noxious or invasive species over the long-term.
- Any improvement in PFC would be beneficial for the area(s) affected with the scale of those impacts dependent upon how many miles of stream/shoreline were actually improved rather than simply maintained. Maintenance of PFC would represent no change in current conditions resulting in no impact.

Water Quality/Riparian Wetland Restoration Activities

- Removal of unwanted trees and shrubs in riparian areas may have indirect adverse impacts to water quality until planted species become established. Removal of woody species could adversely affect water temperature over the short-term, as shaded areas would be reduced. Streambanks would be more susceptible to erosion as root systems from removed plants decay and sources of woody debris were reduced or eliminated.
- Cyclical burning of the area would reduce the effectiveness of the golden loosestrife beetle release—a biological weed control agent currently present in the TWMA that has had excellent success controlling purple loosestrife. Selectively burning localized patches would reduce impacts to wintering golden loosestrife-beetle larvae and supplemental releases would occur as necessary.
- Water quality could be adversely affected over the short-term during the construction of a pond at TWMA. Sediment input to the Snake River could increase during construction activities and continue over the short-term due to a lack of stabilizing vegetation. Increased instability of the soil surface in the construction area would occur until vegetation became established and the pond began to function. The disturbed area would be susceptible to noxious weeds until desirable plants are established. Water quality would improve over the long-term as emergent vegetation becomes established. An additional pond would increase the ability of the TWMA to process chemical (e.g., nitrogen and phosphorus) and biological (e.g., E. coil bacteria) pollutants and would provide an additional area for sediment retention (Pappani and Inouye 2003).
- The aggressiveness and tenacity of noxious weed species in riparian areas can preclude the establishment of more desirable plant species. Reducing or eliminating weeds in riparian areas would reduce or eliminate competition from undesirable plants and would increase the ability of the riparian area to support a diverse composition of desirable wetland vegetation.

Discussion of Impacts by Alternative

Water Quality, Riparian and Wetlands: Alternative A

Livestock Grazing Management Activities: Approximately 6.744 miles of river and reservoir frontage in 10 allotments (USDI 2005a), 20 ft. (0.004 miles) in the Bruneau Arm Allotment (USDI 2004a), and up to 4.3 miles in the Con Shea are potentially accessible to livestock grazing in the NCA. Implementation of Idaho S&Gs would slightly improve (for segments rated functioning at risk) or maintain (for segments rated proper functioning) the functioning condition of these areas over the short-term and could moderately improve riparian condition over the long-term. The benefits to water quality and riparian habitat would

occur at the local level. The remaining river and reservoir frontage would not be directly impacted by livestock. Reduction of sediment input from uplands, either from wind or runoff sources, would have a beneficial impact on water quality over the long-term. Livestock would not have access to approximately 5 miles of riparian habitat associated with the Priest Ranch and Battle Creek Pasture 8B. This would moderately improve or maintain functioning condition and water quality at the local level over the long-term.

Riparian/Wetlands – Management Activities: Improving condition class from functioning at risk to PFC would moderately benefit lentic wetlands at the local level (approximately 5%) over the long-term. The remaining lentic wetlands would be maintained in PFC, which would slightly benefit wetlands at the landscape level over the long-term. Improving 45 acres of lotic wetlands from functioning at risk to PFC and maintaining 45 acres in PFC would moderately benefit lotic wetlands over the short- and long-term at the landscape level. Improvement of wetland conditions in the TWMA would improve water quality at the local level over the long-term; however, improving or maintaining riparian functioning condition throughout the NCA would have a minimal impact on total pollutant inputs into the Snake River, and, therefore, water quality.

Riparian Habitat Restoration Activities: Restoring riparian habitat (1 mile or approximately 1% of the riparian habitat in the NCA) would slightly benefit water quality and riparian resources at the local level, but would have no appreciable impact at the landscape level over the long-term. Using fire to restore 80 acres of wetlands at the TWMA would have slight short-term adverse impacts to water quality and wetland habitat; however, these impacts would occur at the local level and would be apparent primarily between the treatment and the next growing season. Water quality and habitat conditions, including resistance to noxious weed infestations, would slightly improve at the landscape level over the long-term. Because of the potential reduced effectiveness of the golden loosestrife beetle as a biological control agent, purple loosestrife could be present as a minor component over the long-term. The reduction or eradication of weeds in riparian and wetland areas would have minimal impacts to water quality over the short- and long-term, but would benefit functioning condition at the landscape level over the long-term.

Surface Disturbing Activities: The 43,000-acre avoidance area includes approximately 18 miles of the Snake River along the south side that would be protected from major rights-of-way actions. This would have slight localized benefits for that area over the long-term. There would be no impact to water quality from active mineral material sites. The potential for noxious weeds to spread from mineral material sites to riparian areas is limited and would depend on dispersal mechanisms (i.e., recreation users, livestock) traveling between mineral material sites and riparian areas. Dispersed recreation would have slight short- and long-term impacts to water quality and riparian habitat at the local level. Expanding the Cove Recreation site would increase recreational use in the immediate vicinity and could negligibly increase long-term adverse impacts to riparian vegetation and to a lesser degree impacts to water quality over the long-term. Expanding facilities at Dedication Point would have no impact on water quality or riparian habitat. The limited development would do little to offset the impacts of dispersed recreation on riparian areas, which would continue to be desirable destinations for recreationists regardless of the level of development.

Transportation Management Activities: Maintaining vehicle closures would slightly benefit water quality and riparian and wetland functioning condition over the short- and long-term at the local level. Benefits would result along 2.4 miles of riparian areas that have roads passing through them (1.8mi at Halverson Bar area, and 0.6mi at the TWMA). Designating routes in the vicinity of riparian areas in the remainder of the NCA would slightly benefit water and functioning condi-

tion primarily at the local level over the long-term. Approximately 14 miles of riparian areas are accessible by or adjacent to (within 165 feet) roads.

Conclusion – Water Quality, Riparian and Wetlands – Alternative A

Actions that limit surface disturbance or reduce the establishment or spread of noxious weeds (closures and restrictions to livestock grazing or limitations on off road vehicle use, etc.) would have slight to moderate long-term beneficial impacts at the local level. Existing recreation facilities would not meet the increasing demand for river-based recreation, which would result in slight to moderate long-term adverse impacts to riparian areas. Restoring one mile of riparian habitat and 80 acres of wetlands in the TWMA would result in slight long-term benefits at the local level; however, in the long-term, riparian areas would be moderately adversely impacted by weed infestations at the landscape level. In addition, maintaining or improving PFC along all 101 stream and shoreline miles would have a slight long-term benefit impact at the landscape level. The objective would be met; however, the DFC would not be met as a result of limited restoration of riparian habitat.

Water Quality, Riparian and Wetlands: Alternative B

Livestock Grazing Management Activities: The impacts of livestock grazing on water quality and riparian habitat would be as described in Alternative A. Impacts resulting from closures to livestock grazing would be as described in Alternative A; however, an additional 0.25 miles of riparian habitat in the Melba Seeding Allotment (river pasture) could slightly benefit from the elimination or seasonal restriction of grazing over the long-term.

Riparian/Wetlands – Management Activities: The impacts of improving or maintaining functioning condition of lotic and lentic wetlands would be as described in Alternative A. Restoring 20 miles of riparian habitat (approximately 20% of the riparian habitat in the NCA) would have minimal short-term adverse and long-term beneficial impacts to water quality at the local level. Riparian habitat conditions play a relatively small role in regulating water quality in the NCA. Although occurring over the same area as water quality improvements, restoration would have more substantial beneficial impacts to riparian habitat conditions, especially small streams, over the long-term. The impacts to water quality and wetland functioning condition of restoring wetlands in the TWMA would be as described in alternative A. The impacts on water quality associated with the construction and operation of a 20-acre pond in the TWMA would be slight at the local level over the short- and long-term. Because the pond would be managed for shorebird habitat, there would be a small (probably <5 acres) increase in wetland vegetation and limited improvement in water quality over the long-term. The impacts of reducing or eradicating weeds in riparian and wetland areas would be as described in alternative A.

Special Designations – Wild & Scenic Rivers: A recommendation as suitable for a recreational classification under the W&SR Act would provide for 21.5 miles of the Snake River at least until Congress acts on the recommendation. Water quality and riparian conditions would be maintained over the long-term, as least as they could be affected by an impoundment. The potential impacts to water quality and riparian conditions in the remaining 27.5 miles would be as described in Alternative A.

Surface Disturbing Activities: The 105,000-acre avoidance area includes 31 miles of the Snake River that would be protected from major rights-of-way actions. This would have slight long-term landscape-wide benefits for riparian and wetland areas. Impacts from mineral activities would be the same as Alternative A. The impacts of, facilities development, and commercial use permit restrictions on water quality and riparian areas would be as described in alternative A. Development of the Initial Point site would have no impact on ri-

parian areas. Development of the Three Pole site could slightly increase recreational use and associated impacts to water quality and riparian habitat in the vicinity of the Swan Falls dam. The impacts would occur over the long-term and would be at the local level.

Transportation Management Activities: Maintaining vehicle closures and designating routes would benefit water quality and riparian and wetland functioning condition as described in Alternative A; however, additional closures would benefit approximately 6 miles on both sides of the Snake River in the Halverson Bar area and up to 3.4 miles of riparian habitat on the south side of the Bruneau Arm. These benefits would occur over the long-term at the local level.

Conclusion – Water Quality, Riparian and Wetlands – Alternative B

Construction of an additional pond at TWMA would moderately improve water quality at the local level over the long-term. Actions that limit surface disturbance or reduce the establishment or spread of noxious weeds (closures and restrictions to livestock grazing or limitations on off road vehicle use, etc.) would have slight to moderate long-term beneficial impacts at the landscape level. Additional recreational facilities would not meet the increasing demand for river-based recreation, which would result in slight to moderate long-term adverse impacts to riparian areas. Weed treatments and restoring 20 miles of riparian habitat and 80 acres of wetlands in the TWMA would result in slight to moderate long-term benefits at the local level. In addition, maintaining or improving PFC along all 101 stream and shoreline miles would have slight long-term benefits at the landscape level. Overall this alternative would maintain and slightly improve riparian areas. The objective and DFC would be met.

Water Quality, Riparian and Wetlands: Alternative C

Lands and Realty Activities: The benefits of consolidating ownership would be as described in Alternative A.

Livestock Grazing Management Activities: Elimination of grazing in riparian areas would have moderate short- and long-term benefits to water quality and riparian functioning condition in approximately 11 miles of river and reservoir frontage (those that are accessible to grazing in Alternative A). Improvements in watershed conditions throughout the NCA would reduce erosion and moderately benefit water quality at the landscape level over the long-term.

Riparian/Wetlands Management Activities: The impacts of improving or maintaining functioning condition of lotic and lentic wetlands would be as described in Alternative A. Restoring 40 miles of riparian habitat (approximately 40% of the riparian habitat in the NCA) would have the same impacts to water quality as described in Alternative B. The impacts to water quality and wetland functioning condition of restoring wetlands in the TWMA would be as described in Alternative A. The impacts of constructing a 20-acre pond in the TWMA would be as described in Alternative B. The impacts of reducing or eradicating weeds in riparian and wetland areas would be as described in Alternative A.

Surface Disturbing Activities: The 163,600-acre avoidance area includes 101 miles of the Snake River that would be protected from major rights-of-way actions. This would have slight long-term landscape-wide benefits for riparian and wetland areas. Impacts from mineral activities would be the same as Alternative A. Impacts of campfire restrictions, facilities development, and commercial use permit restrictions on water quality and riparian areas would be as described in alternatives A and B. Development of the Celebration Park Annex would have slight short- and long-term impacts to riparian vegetation and water quality in the immediate vicinity of the site with the potential for slightly increased dispersed use associated impacts in the area. Development of the Guffey Butte site could slightly increase impacts to riparian habitat and water quality from dispersed use in the vicinity of the site.

Transportation Management Activities: Maintaining vehicle closures and designating routes would be as described in Alternatives A and B; however, this alternative would benefit an additional 12.8 miles of riparian areas on the north side of the Snake River between Grand View and Sinker Butte. These benefits would occur at the landscape level in the short- and long-term.

Special Designations - Wild & Scenic Rivers: A recommendation as suitable for a recreational classification under the W&SR Act would provide protection for 49 miles of the Snake River, at least until Congress acts on the recommendation. Water quality and riparian conditions would be maintained over the long-term. Overall riparian use would be protected from uses that would alter the values for which there would be recommended through greater management emphasis.

Conclusion – Water Quality, Riparian and Wetlands – Alternative C

Construction of an additional pond at TWMA would moderately improve water quality at the local level over the long-term. Actions that limit surface disturbance or reduce the establishment or spread of noxious weeds (elimination of livestock grazing or limitations on off road vehicle use, etc.) would be moderately to highly beneficial over the long-term at the landscape level. Of the four recreation facilities, only Celebration Park and Guffey Butte would provide additional water-based opportunities, but they would not meet the increasing demand for river-based recreation. The result of limited water-based recreation facilities would result in slight long-term adverse impacts to riparian areas. Weed treatments and restoring 40 miles of riparian habitat and 80 acres of wetlands in the TWMA would result in moderate to high long-term benefits at the landscape level. In addition, maintaining or improving PFC along all 101 stream and shoreline miles would have a slight long-term benefit at the landscape level. Overall this alternative would maintain and improve riparian areas. The objective and DFC would be met.

Water Quality, Riparian and Wetlands: Alternative D

Lands and Realty Activities: The impacts to water quality and riparian habitat from Avoidance areas would be the same as Alternative A.

Livestock Grazing Management Activities: The impacts of livestock grazing and grazing closures would be as described in Alternative A.

Riparian/Wetlands Management Activities: The impacts of improving or maintaining functioning condition of lotic and lentic wetlands would be as described in Alternative A. The impacts of restoration would be as described in Alternative C. The impacts to water quality and wetland functioning condition of restoring wetlands in the TWMA would be as described in Alternative A. The impacts of constructing a 20-acre pond in the TWMA would be as described in Alternative B. The impacts of reducing or eradicating weeds would be as described in Alternative A.

Surface Disturbing Activities: The impacts of surface disturbances related to material extraction from mineral material sites and recreational uses would be as described in Alternative A. The impacts of recreation facilities development and commercial use permit restrictions would be as described in Alternative C. Development and use of the Black Butte Boat Access would have slight short- and long-term adverse impacts in the immediate vicinity of the site with the potential for slight to moderate adverse impacts from increased dispersed use in the surrounding area.

Transportation Management Activities: Maintaining vehicle closures and designating routes would be as described in Alternative B, except that approximately 1 mile of the near Guffey Butte area would remain open. These benefits would occur at the landscape level over the long-term.

Special Designations - Wild & Scenic Rivers: The impact by protecting, but not recommend-

ing as eligible, 49 miles of the Snake River would be as described in Alternative A.

Conclusion – Water Quality, Riparian and Wetlands – Alternative D

Construction of an additional pond at TWMA would moderately improve water quality at the local level over the long-term. Actions that limit surface disturbance or reduce the establishment or spread of noxious weeds would have moderate long-term beneficial impacts at the landscape level. Recreation facility development would not meet the increasing demand for river-based recreation and would result in slight to moderate short- and long-term adverse localized impacts. Weed treatments and restoring 40 miles of riparian habitat and 80 acres of wetlands in the TWMA would result in moderate to high long-term benefits at the landscape level. In addition, maintaining or improving PFC along all 101 stream and shoreline miles would have a slight long-term benefit at the landscape level. Overall this alternative would maintain and improve riparian areas. The objective and DFC would be met.

4.2.10 Visual Resources

Summary

The objectives would be met under each of the alternatives. Vegetation treatments and recreation developments generally result in long-term benefits at the cost of short-term adverse impacts to visual quality. The area affected by these activities is the least in Alternative A and the greatest in Alternatives C and D. Alternative A provides the highest protection of visual resources with a VRM I Class. Alternative C provides the greatest level of protection by recommending 49 miles of W&SR designation and the greatest amount of VRM Class II designations.

Assumptions

- Short-term impacts would be those that are not visible within a 10-year period (the anticipated time it would take to restore an area within the NCA (See section 3.3.10). Long-term impacts would be those that remain visible beyond the normal restoration period.

How Activities Affect Visual Resources

Direct Impacts

Idaho Army National Guard Activities

- Military training would have short- and long-term adverse impacts to visual resources. Military vehicles, equipment, and facilities would create a contrast with the surrounding landscape over the long-term. Communication centers, vehicle maintenance and refueling stations, low flying aircraft, large-scale food preparation sites, and other logistical activities are examples of the kinds of direct short-term impacts to visual resources that would be expected.

Livestock Grazing Management Activities

- Livestock grazing can have adverse impacts to visual resources depending on utilization levels and rangeland improvement projects. Direct adverse impacts result when different levels of utilization in adjacent pastures create a visible contrast of vegetation on the landscape. Where the two pastures meet, a noticeable contrast in utilization levels can be visible depending on how utilization differs between the two areas. A high concentration of livestock can have direct adverse impacts to visual resources by creating increased surface disturbance in a site-specific area. Feeding and watering areas for example, often display a relatively higher amount of surface disturbance than the surrounding landscape resulting in a noticeable contrast to the casual observer. These areas may be denuded of vegetation over the short-term and invaded by weeds over the long-term.

Recreation Management Activities

- The primary adverse impacts are increased localized surface disturbance associated with the construction of new facilities. Adverse impacts to localized areas would increase somewhat by concentrating use in the area of development. Properly developed use "hardens" part of the area to con-

tain the impacts from surface disturbance with the goal of protecting the surrounding area. Short-term impacts can result from surface disturbance during construction and the associated restoration of the areas adjacent to the newly developed facilities. Long-term impacts result from the increased use of the area.

Surface Disturbing Activities (Lands and Realty – Rights-of-Way and Utility Corridors)

- Rights-of-way have adverse impacts to visual resources by creating surface disturbance and structures on the landscape. Projects such as communication sites, electric transmission lines, oil and gas pipelines, roads, and wind energy developments are all examples of the adverse impacts to visual impacts that Recreation Opportunity Spectrum (ROS) might include.

Transportation Management Activities

- Visual resources can be adversely impacted by motorized vehicle recreation that creates new trails and disturbs vegetation communities. Until a road designation is completed and the routes posted, adverse impacts to visual resources would continue.

Vegetation – Fuels Management Activities

- Hazardous fuels reduction through prescribed fire, chemical, biological, and mechanical treatments could have beneficial and adverse impacts to the appearance of the landscape. Hazardous fuels treatments generally require reductions in surface vegetation, resulting in surface disturbance and possible contrasts with the surrounding landscape along treatment boundaries. Direct adverse impacts would result from the surface disturbance associated with the treatment by altering the line, color, and texture of the landscape. Treatments involving the use of prescribed fire for example, would result in a blackened landscape for one to three growing seasons and could result in additional adverse impacts from smoke in the atmosphere.

Vegetation – Restoration Activities

- Impacts from wildlife and SSS habitat restoration projects would have impacts to the appearance of the landscape. Direct adverse impacts would result over the short-term as a result of surface disturbing activities associated with restoration. Seedbed preparation and seeding techniques that disturb the soil surface would create a noticeable contrast to the surrounding vegetation for the casual observer until the restored vegetation became established. The effects of restoration could have adverse impacts over the long-term after vegetation becomes established due to vegetation growing in noticeable patterns, like furrows. These impacts could be minimized with techniques that result in a more random distribution of seeded plants. When restoration projects require fencing, adverse impacts would result and persist until the fence is removed.

Mineral Material Activities

- Long and short-term adverse impacts result from the surface disturbance associated with mineral extraction on public lands. The form, color, and texture of the surface are altered over the long-term where minerals are extracted. Short-term impacts include dust associated with hauling. Expansion of existing sites would contribute marginally to sites that are already disturbed.

Indirect Impacts

Idaho Army National Guard Activities

- Adverse impacts to visual quality would result from surface disturbing activities such as motorized vehicle use and troop movements. Multiple tracked vehicles moving in teams across grassland areas and dirt roads would kick up dust during the dry season resulting in reduced visibility over the short-term.

Livestock Grazing Management Activities

- Indirect adverse impacts to the appearance of the landscape can result from rangeland improvement projects that are used to manage livestock over the long-term. The appearance of the landscape can be adversely impacted by the presence of fences, reservoirs, spring developments, water tanks, cattle guards, and other man made structures that are sometimes necessary to manage livestock.

Special Designations

- SRMAs are administrative designations. They benefit visual resources by recognizing the need for a higher level of managerial presence due to specific resource values and expected increases in demand for recreation on public lands.
- Recreation developments that attract users to an area would have beneficial impacts on a landscape level with the cost of adverse impacts to localized areas. Over the long-term, impacts on a landscape level would be beneficial by dispersing surface disturbing activities associated with recreation. Facilities would reduce visual impacts associated with waste disposal, soil surface damage, and damage of sensitive vegetation communities because these facilities present a public interface area where trail designations and resource values can be communicated, parking can be localized, with toilets and trash bins provided.
- Designation of stretches of the Snake River under the WSR Act would have beneficial impacts to visual resources over the short and long-term. The designation would protect the free-flowing condition and unique wildlife values associated with the Snake River, resulting in indirect beneficial impacts over the long-term. Preservation of the recreational qualities associated with the Snake River Canyon would maintain the appearance of the Canyon by limiting future construction projects, such as impoundment structures.

Surface Disturbing Activities (Lands and Realty – Rights-of-Way and Utility Corridors)

- Avoidance areas benefit visual resources indirectly by limiting future ROW projects within their boundaries.

Vegetation – Fire Suppression Activities

- Fire has adverse impacts to visual resources in the NCA by creating noticeable contrasts in vegetation across the landscape. As a result of fires, burned areas are blackened over the short-term, and often become dominated by cheatgrass and other invasive weeds over the long-term (USDI 2000a, p 43). Fire would also cause short-term adverse impacts to visibility due to smoke in the atmosphere.

Vegetation – Fire Suppression Activities

- Fire suppression that uses aggressive surface disturbing actions can have short- and long-term adverse impacts by creating patters that are not natural in the landscape. The area does not recover easily and is frequently invaded by invasive species that prevent native vegetation from returning.

Vegetation – Fuels Management Activities

- Indirect benefits from hazardous fuel treatments would result over the long-term by preventing hazardous fuel accumulations and reducing the probability of large fires that blacken the landscape. Where fuel treatments convert annual grasslands to perennial vegetation, a mosaic would be created on the landscape and may be more visually pleasing than a homogenous stand of annual grass.
- Campfires could have indirect adverse impacts on the landscape if the fire were to escape into the surrounding area.

Vegetation – Restoration Activities

- Impacts are generally beneficial over the long-term, with the degree dependent on the success of the restoration project (i.e., the establishment of desired vegetation). Visual quality could be directly enhanced

where restoration projects mimic a more natural mosaic of vegetation across the landscape. Visual resources could benefit indirectly over the long-term where successful restoration projects attract wildlife, enhancing the quality of the visual experience.

Discussion of Impacts by Alternative

Visual Resources: Alternative A

Idaho Army National Guard Activities: The area is designated as VRM Class IV and allows for greater modification of the landscape than any of the other VRM classes therefore there would be no impacts.

Lands and Realty Activities: All major utility transportation systems would be located within the existing utility corridor. This corridor would have a negligible adverse long-term localized impact due to the relatively small area of the NCA from which it would be visible. The corridor would be visible from a VRM Class III area. Surface disturbing activities would be limited within the 43,000-acre (9% of the NCA) avoidance area, resulting in slight localized benefits to visual resources over the long-term.

Livestock Grazing Management Activities: Livestock grazing restrictions on the Priest Ranch and in Battle Creek Pasture 8B along C.J. Strike Reservoir would continue to have slight beneficial localized impacts to visual resources over the long-term. There would be no surface disturbance or rangeland improvement projects associated with livestock grazing in the Priest Ranch and Battle Creek 8B pastures. These benefits would generally be negligible, since they would occur on 3,900 acres (>1% of the NCA). Slight long-term adverse impacts associated with grazing and rangeland improvement projects would continue where livestock grazing and rangeland improvement projects occur.

Recreation Management Activities: Three existing recreation facilities would be maintained and expanded to meet demand. Localized adverse impacts to visual resources would depend upon the degree of expansion and the ability of the expanded areas to blend in with the existing landscape Recreational facilities would exist in VRM Classes I, II, and III. Sixteen hundred acres (>1% of the NCA) would be closed to motorized vehicle recreation. The long-term beneficial impacts from the motorized vehicle restrictions would be negligible due to the small number of acres affected. The area closed to motorized vehicle recreation would coincide with a VRM Class I area in the Snake River Canyon. There would be no recommendation to designate any stretch of the Snake River under the W&SR Act. The free-flowing condition and unique wildlife values associated with 49 miles of the Snake River would be protected, resulting in no impact to visual resources over the long-term. VRM Class I & II would afford some level of protection for the Snake River Canyon.

Vegetation – Fire Suppression Activities: Further loss of existing native shrub habitat would be limited to no more than 50,000 acres (10% of the NCA). Slight adverse impacts to visual resources from the loss of native shrub habitat from fire would result over the short and long-term. Impacts to visual resources due to the loss of existing shrub habitat from fire would be slight due to the relatively small number of acres affected.

Vegetation – Fuels Management Activities: Fuels treatments on 10,000 acres (2% of the NCA) would have slight localized adverse impacts over the short-term and moderate to high localized benefits over the long-term. All impacts to visual resources would be marginal due to the relatively small number of acres affected.

Vegetation – Restoration Activities: Restoration activities would impact visual resources on 10,000 acres (2% of the NCA) of small mammal habitat. Slight adverse impacts would result over the short-term where restoration activities disturb the soil surface. Slight long-term adverse impacts may result where restored vegetation grows in a noticeable pattern. Slight to moderate beneficial impacts

would result over the long-term depending on the success of the project. The scale of these impacts would be marginal because of the relatively small number of acres designated for restoration.

Conclusion – Visual Resources – Alternative A

Application of the route designation criteria would provide slight to moderate benefits at the local level over the long-term. Impacts from restoration activities would be slightly adverse in the short-term but would result in moderately beneficial impacts over the long-term at the local level. Slight, long-term adverse impacts from IDARNG activities would occur at the local level. Scenic values in the majority of the Snake River Canyon would be maintained over the long-term. Development of mineral material sites would have slight to moderate adverse impacts at the local level. The VRM objective would be met. No DFC identified.

Visual Resources: Alternative B

Idaho Army National Guard Activities: Impacts would be the same as described in Alternative A but over a greater area.

Lands and Realty Activities: The proposed utility corridor would have a highly adverse landscape-wide impact over the long-term by passing through an area of increased sensitivity due to the presence of State Highway 78 (Lands Map 2). Suspended electrical transmission lines, support structures, and above ground facilities (i.e., substations) would be clearly visible to the casual observer in these areas. The utility corridor would pass through a VRM Class III area. An avoidance area of 105,000 acres (21% of the NCA) would extend along parts of the Snake River Canyon and its rim to protect the scenic values of the canyon. This would result in high localized benefits to visual resources over the long-term by limiting future rights-of-way projects. The avoidance area occurs within a VRM Class III area.

Livestock Grazing Management Activities: Impacts to visual resources would be the same as those described under Alternative A, except they would occur over a greater area (8,600 acres; <2% of the NCA). Impacts to visual resources would be negligible.

Recreation Management Activities: In addition to the three existing recreational facilities, two additional facilities would be developed. Long-term adverse impacts to localized areas as a result of the construction would be slight relative to the entire area of the NCA. Impacts would be minimized, as structures would account for the surrounding color, form, line, and texture of their respective viewsheds. Slight long-term benefits on a landscape scale would result from the construction of the additional facilities. The new facilities would yield slight long-term benefits near population centers and could slightly reduce adverse impacts associated with motorized vehicle use in the north and western portions of the NCA over the long-term. Approximately 6,400 acres (<2% of the NCA) would be closed to motorized vehicle use, resulting in a reduction in potential adverse impacts to visual resources from surface disturbing activities. The long-term impact would be negligible and localized due to the small amount of area affected. Four SRMAs would include 56,500 acres. Although this would be fewer SRMA acres than proposed under Alternative A, there would be a slight localized benefit to visual resources due to a shift in the management emphasis of SRMA acres. Management would emphasize recreational, scenic, and cultural values where current and projected demand warrants. There would be a recommendation to designate 21.5 miles of the Snake River for recreational classification under the W&SR Act. The free-flowing condition and unique wildlife values associated with that stretch of the Snake River would be protected, resulting in slight to moderate localized benefits to visual resources over the long-term.

Vegetation – Fire Suppression Activities: The impacts from fire and fire suppression would be the same as in Alternative A, except a

smaller area would be affected. Further loss of existing native shrub habitat would be limited to no more than 30,000 acres (6% of the NCA).

Vegetation – Fuels Management Activities: Hazardous fuels treatments would have the same impacts as described under Alternative A, except a greater area would be affected. Under this alternative 70,000 acres (14% of the NCA) would be treated for hazardous fuels. Impacts to visual resources would be slight short-term localized due to the small number of acres affected. Campfires would be less likely to escape and become large fires that blacken the landscape. The scale of these impacts would be localized.

Vegetation – Restoration Activities: Impacts would be the same as described under Alternative A, except would occur over a greater area. Restoration activities would result in slight short-term localized adverse on 50,000 acres (10% of the NCA).

Conclusion – Visual Resources – Alternative B

Construction of two new recreation facilities, closures to motorized vehicles, application of the route designation criteria, and the designation of four SRMAs would provide slight to moderate local benefits over the long-term. Vegetation treatments would result in slight adverse impacts at the local level in the short-term and slight benefits at the landscape level over the long-term. Expanding the avoidance area would be slightly beneficial at the landscape level. Military training would be consistent with a VRM Class IV area. The W&SR recommendation would slightly to moderately benefit visual resources along 22 miles of the River. Slight long-term protection along the Oregon Trail and the Canyon would be provided by the SRMA designations. Use of active mineral material sites would have slight long-term adverse impacts at the local level. The VRM objective would be met. No DFC identified.

Visual Resources: Alternative C

Idaho Army National Guard Activities: Areas used by IDARNG for off road maneuver training would be reduced by 22,300 acres (4% of the NCA). In addition, 3,900 acres of the Bravo Area would be removed from the OTA entirely. In terms of visual resources, this action would have no impacts. Impacts from surface disturbance on the remaining OTA may be greater than those described under Alternative A. The IDARNG may be forced to perform maneuver training throughout a smaller area that could result in more concentrated surface disturbance in areas left available for training. The IDARNG would have fewer options to let vegetation in areas rest and recover after training over the long-term. The Bravo Area would reside in a VRM Class IV designated area.

Lands and Realty – Rights-of-Way Activities: An avoidance area of 163,000 acres (32% of the NCA) would extend along the Snake River Canyon and its rim to protect the scenic values of the canyon. This would result in moderate benefits to visual resources over the long-term by limiting future rights-of-way projects. The avoidance area occurs within VRM Classes II and III.

Livestock Grazing Management Activities: Removing livestock from the NCA would result in a greater rate of recovery of native vegetation and would result in a slightly improved visual quality. In areas around range improvements, the removal of projects and revegetation of denuded areas would further result in long-term localized improved visual quality.

Recreation Management Activities: Existing recreation facilities would be maintained and developed and there would be construction of four additional recreational facilities to meet user demand. The impacts associated with the additional recreational facilities would be the same as those identified in Alternative B, except more area would be affected due to the construction of additional facilities. Additional recreational facilities would be constructed in

VRM Class III areas. Restricting campfires to established campsites or metal fire pans would have the same impacts as described under Alternative B.

Transportation Management Activities: Adverse impacts to visual resources associated with surface disturbance from motorized vehicle use would be eliminated on 13,200 acres (<3% of the NCA). Long-term localized impacts as a result of this restriction would be slight due to the area affected. Motorized vehicle restrictions would occur in VRM Class II areas. Approximately 50,000 acres (10% of the NCA) would be included within three SRMAs. Visual resources in these areas would benefit slightly over the long-term. The Owyhee Front SRMA would be eliminated resulting in slight localized adverse impacts over the long-term. Impacts associated with the designation of the Snake River under the W&SR Act would be the same as those discussed under Alternative B, except more of the river would be affected. Under this alternative, 49 miles of the River would be recommended for designation. The designations would coincide with VRM Class III areas.

Vegetation – Fire Suppression Activities: Impacts to visual resources due to a loss of native shrub habitat from fire would be the same as those described under Alternative A, except a smaller area would be affected. Further loss of existing native shrub habitat would be limited to no more than 15,000 acres (3% of the NCA). Long-term localized impacts to visual resources due to the loss of existing shrub habitat from fire would be slight due to the relatively small number of acres affected (limited to no more than 15,000 acres – 3% of the NCA).

Vegetation – Fuels Management Activities: Hazardous fuels treatments would have the same impacts as described under Alternative A, except a greater area would be affected Localized long-term impacts would be moderate due to the number of acres treated for hazardous fuels (100,000 acres – 20% of the NCA).

Vegetation – Restoration Activities: Impacts would be similar to those described under Alternative A, except would occur over 130,000 acres (26% of the NCA). The long-term landscape-wide impacts would be high because of the relatively high number of acres designated for restoration.

Conclusion – Visual Resources – Alternative C

Construction of four new recreation facilities, closures to motorized vehicles, application of the route designation criteria, and the designation of four SRMAs would provide slight to moderate local benefits over the long-term. Vegetation treatments would result in moderate adverse impacts at the local level in the short-term and moderate benefits at the landscape level over the long-term. Expanding the avoidance area would be moderately beneficial at the landscape level over the long-term. Military training would be consistent with the VRM classifications. The W&SR recommendation would slightly to moderately benefit visual resources over the long-term along 49 miles of the Snake River. Elimination of livestock grazing would result in a slight long-term localized benefit in VRM Class II areas from the removal of range projects. The VRM II classification and SRMA designations along the Oregon Trail and in the Snake River Canyon would provide moderate long-term landscape-wide protection for the scenic values. Use of active mineral material sites would have slight long-term adverse impacts at the local level. The VRM objective would be met. No DFC identified.

Visual Resources: Alternative D

Idaho Army National Guard Activities: Impacts would be the same as those described under Alternative A, but would affect a greater area. There would be a 4,100-acre expansion of the maneuver training area, bringing the total area of the OTA to roughly 142,600 acres (28% of the NCA). The long-term adverse impacts to visual resources as a result of military maneuver training would be slightly more

than Alternative A due the number of acres affected.

Lands and Realty Activities: The proposed utility corridor would have moderate localized adverse impacts over the long-term. Suspended electrical transmission lines, support structures, and above ground facilities (i.e., substations) would be clearly visible to the casual observer. Impacts would be less adverse than those described under Alternative B because the corridor would not be located near an area of high sensitivity (i.e., State Highway 78). The corridor would pass through a VRM Class III area and would be visible from portions of VRM Class II designated areas near Swan Falls Road. Impacts from the avoidance area would be the same as described in Alternative A.

Livestock Grazing Management Activities: Impacts would be the same as described in Alternative A, except they would occur over a greater area. An additional 3,400 acres around Kuna Butte would be restricted. The total area where grazing would be eliminated, or restricted would total 7,300 acres (1% of the NCA). Beneficial long-term localized impacts as a result of grazing restrictions would be negligible.

Recreation Management Activities: Impacts associated with the construction of new recreation facilities would be the same as described in Alternate B, except would occur over a greater area. Five additional recreational facilities would be constructed. Restricting campfires to established campsites or metal fire pans would have the same impacts as described under Alternative B.

Transportation Management Activities: Impacts associated with Motorized vehicle restrictions would be the same as those described under Alternative B, except they would occur over a smaller area. Approximately 4,400 acres (>1% of the NCA) would be closed to motorized vehicle recreation.

Special Designations: Impacts would be the same as described under Alternative C.

Vegetation – Fire Suppression Activities: Impacts would be the same as those described under Alternative B.

Vegetation – Fuels Management Activities: Impacts would be the same as those described under Alternative C.

Vegetation – Restoration Activities: Impacts would be the same as described under Alternative C.

Conclusion – Visual Resources – Alternative D

Construction of five new recreation facilities, closures to motorized vehicles, application of the route designation criteria, and the designation of four SRMAs would provide slight to moderate local benefits over the long-term. Vegetation treatments would result in moderate adverse impacts at the local level in the short-term and moderate benefits at the landscape-level over the long-term. Maintaining the existing avoidance area would be slightly beneficial at the local level over the long-term. Military training would be consistent with the VRM classifications. The VRM II classification and SRMA designations along the Oregon Trail and in the Snake River Canyon would provide moderate long-term landscape-wide protection for the scenic values. Development of mineral material sites would have slight to moderate long-term adverse impacts at the local level. The VRM objective would be met. No DFC identified.

4.2.11 Wild Horses and Burros

Because only 3,400 acres of the Black Mountain HMA are within the NCA boundary, the program would be managed in conformance with the Owyhee RMP and impacts would be as discussed in that document (USDI 1999b).

4.2.12 Idaho Army National Guard

Summary

Each alternative would meet the objective and DFC for the IDARNG. Alternative A provides flexibility with the fewest restrictions. Alternatives B, C and D would impose mandatory restrictions on off-road maneuver training, which would reduce IDARNG training flexibility. Alternative C would have the greatest adverse impact to the IDARNG by significantly reducing the amount of area available for maneuver training. However, the restrictions on off-road maneuvers in the Bravo Area would be offset in Alternatives B and D by providing expanded maneuver training opportunities outside the current OTA boundary. The expansion area identified under Alternative B would provide greater training opportunities, but would result in greater travel distances, higher costs, and potential loss of training days than identified in Alternative D.

Assumptions

- For analysis purposes, one (1) Training Day (TD) is an 8-hour period.
- Training activities excluded from specific areas of the OTA could be distributed to remaining available OTA areas.
- Distributing training activities from one area of the OTA to one or more other areas in the OTA could entail longer travel distances, which would increase IDARNG transportation costs and decrease available training time.
- BLM would conduct Emergency Stabilization and Rehabilitation (ESR) efforts in the OTA, but would not conduct habitat restoration projects because areas affected by habitat restoration would be protected from subsequent military training activities over the long-term. This continuing reduction in military training areas would eventually make it impossible for IDARNG to meet training requirements.
- IDARNG would conduct rehabilitation efforts in the OTA only in areas that would not be repeatedly disturbed by military training.
- Short-term impacts would be less than 5 years based on the IDARNG budgeting cycle.

How Activities Affect Idaho Army National Guard

Direct Impacts

IDARNG Training Area and/or Training Opportunities

- Restricting military vehicles to designated routes in Maneuver Areas would eliminate off-road maneuvers in the affected area(s), but would not affect dismount (foot) training.
- Actions that limit the availability or location of bivouac sites (i.e., off-road vehicle restrictions, avoidance of shrubs) could adversely affect training flexibility and capability.
- Assigning training to other areas of the OTA could entail longer travel, which would result in higher fuel costs, more vehicle maintenance, and more hours spent in transit, all of which would reduce available training time, and reduce the number of TDs that could be accommodated in the short- and long-term.
- Concentrating training on fewer acres could cause scheduling conflicts that would make it difficult to absorb the additional training load in either the short- or long-term resulting in reduced overall training capability.
- Areas outside the current OTA boundary that are proposed for expanded maneuver training would offset proposed restrictions on off-road maneuver training, as well as restrictions imposed to protect SSS and cultural resources.
- Areas closed to military training due to the presence of sensitive resources (i.e. SSP, cultural resources) would reduce the long-term net acres available for training.

Livestock Grazing Management Activities

- Watering troughs and livestock concentrations in military training areas would have a slight short-term adverse affect on military activities in the immediate area. Be-

cause the military would have to train around them.
- Scheduling conflicts between livestock grazing in the Impact Area and IDARNG training needs occur primarily during April. The withdrawal of the Impact Area to the Department of Defense would provide the IDARNG with flexibility to manage military training and livestock grazing activities in the Impact Area in a manner that best meets IDARNG training requirements.

Recreation – Shooting Area Restrictions
- Eliminating the recreational shooting of rifles and pistols would reduce an existing safety hazard, resulting in a safer training environment over the short- and long-term.

Vegetation – ESR Projects
- BLM would conduct ESR projects in response to wildfire-related impacts to remnant shrub communities. Treated areas would be fenced to exclude a variety of activities including military training until the treatments were determined to be successful. This would reduce the net acres available for maneuver training in the short-term.

Vegetation – Fire Suppression Activities
- When fires occur, live fire training activities cease until the fire is extinguished, which reduces available training time in the short-term.
- Maintenance of perennial communities through fire prevention and suppression ensures quality training opportunities over the short- and long-term.

Vegetation – Noxious Weeds Management Activities
- Any actions taken to reduce noxious weeds, ranging from vehicle washing to treating infested sites, would result in short-term adverse impacts by reducing available training time and increasing costs associated with the various treatments. However, these measures would result in beneficial long-term impacts by reducing the overall establishment of noxious weeds in the OTA, which would result in fewer resources being expended (time, money, manpower, etc.) to combat weed populations that would likely establish in the absence of these measures.

Discussion of Impacts by Alternatives

Idaho Army National Guard: Alternative A

IDARNG Training Area and/or Training Opportunities: There would be no change in training activities or locations. Because training is voluntarily restricted from shrub areas, this policy could be changed to meet future IDARNG training requirements. There would be benefits to training capability and flexibility at the landscape level; however, as additional special resource sites are identified there could be slight to moderate adverse localized impacts. The amount of area designated for excavation training (5 acres) would not meet the IDARNG training requirements resulting in moderate short- and long-term adverse impacts.

Lands and Realty Activities: Withdrawal of the OTA Impact Area would have moderate local benefits in the short- and long-term by increasing management flexibility for the IDARNG.

Livestock Grazing Activities: Livestock grazing in the OTA could have a slight short-term adverse localized impact. Transferring grazing administration in the OTA Impact Area would have moderate localized long-term beneficial impacts by providing increased flexibility in managing grazing.

Recreation Management Activities: Recreational shooting would have moderate long-term adverse impacts at the local level. Dispersed recreation would have a slight localized adverse impact to IDARNG training activities in the long-term as a result of the need to monitor recreational users in the area to ensure safety.

Vegetation – Noxious Weeds Management Activities: The control of noxious weeds would be moderately to highly beneficial at the landscape level over the long-term.

Conclusion – Idaho Army National Guard – Alternative A

There would be slight short- and long-term adverse impacts to IDARNG training activities from livestock grazing, dispersed recreation, and inadequate excavation training opportunities. There would be moderate beneficial impacts from the Impact Area withdrawal. The objective and DFC would be met.

Idaho Army National Guard: Alternative B

IDARNG Training Area and/or Training Opportunities: There would be slight long-term adverse impacts to IDARNG training flexibility. Of the approximate 1,100-vehicle maneuver TDs that would be removed from the Bravo Area, approximately 80% of the TDs would be transferred to the expansion area and the rest of the OTA. Because of the additional travel time to the expansion area there would be a slight loss in training capability. The net acres available for off road vehicle maneuver training would increase resulting in a moderate to high localized benefit in the long-term. The topographic characteristics of the expansion area provide for greater variety and higher quality of off-road training, as well as the possibility of accommodating increased numbers and/or types of training. The mandatory requirement to avoid shrub areas would slightly limit IDARNG flexibility in the long-term. The areas designated for excavation training (3 sites totaling 105 acres) would result in moderate to high long-term beneficial impacts.

Lands and Realty Activities: Impacts from withdrawing the OTA Impact Area would be as described in Alternative A.

Livestock Grazing Management Activities: Impacts would be as described in Alternative A.

Recreation Management Activities: Recreational shooting restrictions would have moderate long-term beneficial impacts at the local level. Other recreation impacts would be the same as identified in Alternative A.

Vegetation – Noxious Weeds Management Activities: Impacts would be as described in Alternative A.

Conclusion – Idaho Army National Guard – Alternative B

Mandatory restrictions on training in shrub areas would slightly to moderately reduce IDARNG training flexibility in the short- and long-term. Withdrawal of the Impact Area and increased training opportunities in the expansion area and excavation areas would have moderate to high long-term benefits. There would be slight adverse impacts from livestock grazing, dispersed recreation, and increased travel time to new training areas. The objective and DFC would be met.

Idaho Army National Guard: Alternative C

IDARNG Training Area and/or Training Opportunities: There would be moderate long-term adverse impacts to IDARNG training flexibility. During brigade size training events (which traditionally occur sometime during May, June, and July), short-term impacts to training capability would be high. The net acres available for off-road vehicle maneuver training would decrease by 22,300 acres. Approximately 90% of the vehicle maneuver training removed from the Bravo Area could be accommodated in the Alpha, Charlie and Delta areas. This transfer would result in a slight to moderate loss of training capability due to scheduling conflicts and additional travel time. The impacts of the mandatory requirement to avoid shrub areas would be the same as Alternative B; however, they would not be mitigated by an additional training area. The loss of a large bivouac site in the Bravo Area that could not be accommodated in the remainder of the OTA would result in a moderate short-term adverse impact. Impacts on

excavation training would be the same as described in Alternative A.

Lands and Realty Activities: Withdrawal of the OTA Impact Area would have the same impacts as described in Alternative A. The removal of 3,900 acres from the OTA would have negligible short- and long-term impacts to IDARNG because they have voluntarily restricted training in this area since 1995.

Livestock Grazing Management Activities: Elimination of livestock grazing would result in a slight long-term beneficial impact.

Recreation Management Activities: Recreational shooting restrictions would have the same impacts as identified in Alternative B. Impacts of dispersed recreation would be the same as identified in Alternative A.

Vegetation – Noxious Weeds Management Activities: Impacts would be the same as identified in Alternative A.

Conclusion – Idaho Army National Guard – Alternative C

Collectively, the loss of training acreage, mandatory restrictions in shrub areas, scheduling conflicts, and loss of TDs would have moderate long-term adverse impacts to IDARNG training flexibility and high short-term adverse impacts to training capability during key training periods (May, June and July). Withdrawal of the Impact Area would have moderate long-term benefits. The objective and DFC would be met.

Idaho Army National Guard: Alternative D

IDARNG Training Area and/or Training Opportunities: There would be slight short- and long-term adverse impacts to IDARNG training. Of the approximate 1,100-vehicle maneuver TDs that would be removed from the Bravo Area, approximately 94% of the TDs could be transferred to the expansion area and the rest of the OTA. There would be a slight loss of training capability because of additional travel time to the expansion area. The net acres available for off-road vehicle maneuver training would decrease; however, as a result of the expansion area training opportunities would be sustained resulting in no impact. The impacts of the mandatory requirement to avoid shrub areas would be the same as Alternative B. The areas designated for excavation training (2 sites totaling 55 acres) would result in moderate long-term beneficial impacts.

Lands and Realty Activities: Impacts of the withdrawal would be the same as described in Alternative A.

Livestock Grazing Management Activities: Impacts would be as described in Alternative A.

Recreation Management Activities: Impacts of recreational shooting restrictions in the OTA would be same as identified in Alternative B. Impacts of dispersed recreation would be the same as identified in Alternative A.

Vegetation – Noxious Weeds Management Activities: Impacts would be same as identified in Alternative A.

Conclusion – Idaho Army National Guard – Alternative D

Mandatory restrictions on training in shrub areas would slightly reduce IDARNG training capability in the short- and long-term. Withdrawal of the Impact Area and increased training opportunities in the expansion area and excavation areas would have moderate long-term benefits. There would be slight short- and long-term adverse impacts from livestock grazing, dispersed recreation, and increased travel time to new training areas. The objective and DFC would be met.

4.2.13 Lands and Realty

Summary

Alternatives B and C identify a second utility corridor the impacts of which would be partially mitigated by the enlarged avoidance areas identified in those same alternatives. Im-

pacts of land consolidation would be beneficial in all alternatives. The realignment of the NCA boundary in Alternatives C and D would enhance use and management.

Assumptions

- All lands and realty proposals undergo site-specific NEPA analysis, and must be compatible with the purposes for which the NCA was established.
- A new utility corridor could eventually result in the construction of high-tension electrical transmission lines, oil and gas pipelines, ancillary facilities, and associated access roads.
- Short-term impacts would be those impacts that either recover or are restored within ten years of an action. Long-term impacts would be those impacts that take longer then ten years to recover.
- Changes in the OTA boundary would not preclude other lands and realty actions.

How Activities Affect Lands and Realty

Direct Impact

Avoidance Areas

- Avoidance areas have beneficial short- and long-term effects on cultural and visual resources and wildlife habitat by reducing localized development-related impacts on soils and vegetation.

Boundary Adjustments

- Boundary adjustments would make management more efficient, and would improve the protection of sensitive resources by allowing users to more clearly identify where special NCA land use regulations apply.

Land Ownership Consolidation

- Private lands near expanding population centers are susceptible to residential, commercial, or industrial development. Consolidation would reduce short- and long-term opportunities for offsite impacts from these types of development, such as increased off-highway vehicle use, introduction and spread of noxious weeds, chemical overspray, trash or debris, and human caused fires. State lands are available for disposal where it meets the State mandate to maximize economic return to the school endowment fund. Acquisition of State and private lands would ensure they remain undeveloped over the long-term. In the short- and long-term, consolidated Federal ownership would increase management efficiency and reduce management costs and liabilities.

Utility Corridors

- Utility corridor would eventually result in the construction of ancillary facilities and associated access roads. Improved access would increase uses and require greater management presence.

Withdrawal of the OTA Impact Area

- Withdrawal of the OTA Impact Area to the DoD would preclude BLM administered lands and realty actions within the area. The DoD would assume responsibility for lands and realty authorizations.

Discussion of Impacts by Alternative

Lands and Realty: Alternative A

Maintaining the existing NCA boundary would have slight short- and long-term adverse impacts to NCA management because the current boundary is difficult to identify on the ground, thus increasing the opportunity for inappropriate and unauthorized uses. The existing 43,000 acre avoidance area would limit location of large-scale utility developments, which would result in slight short- and long-term beneficial impacts. Retaining the existing utility corridor (Lands Map 2) would provide moderate benefits by precluding long-term landscape-scale impacts from major utility developments. Consolidating land ownership would provide moderate long-term beneficial impacts at the landscape level. There would be no impacts from the withdrawal of the OTA Impact Area.

Conclusion – Lands and Realty – Alternative A

Consolidating land ownership and precluding major utility developments would have moderate long-term landscape-wide benefits. Maintaining the existing boundary would result in slight long-term adverse impacts landscape-wide. The objective and DFC would be met.

Lands and Realty: Alternative B

Maintaining the existing NCA boundary and consolidating land ownership would have the same impacts as identified in Alternative A. The 105,000-acre avoidance area would limit location of large-scale utility developments, which would result in moderate long-term landscape-wide benefits. Locating major utilities in a second corridor would provide slight long-term benefits by concentrating environmental impacts; however, there would be moderate long-term adverse impacts at the landscape level because of increased uses and the need for greater management presence. Impacts from the withdrawal of the OTA Impact Area would be the same as Alternative A.

Conclusion – Lands and Realty – Alternative B

Consolidating land ownership would have moderate long-term landscape-wide benefits. Maintaining the existing boundary and providing a second utility corridor would result in slight to moderate long-term adverse impacts at the landscape level. There would be moderate long-term benefits from the avoidance area at the landscape level. The objective and DFC would be met.

Lands and Realty: Alternative C

Realigning the NCA boundary (Lands Map 6) would have moderate landscape-wide short- and long-term benefits. Consolidating land ownership would have the same impacts as Alternative A. The 163,600-acre avoidance area (Lands Map 5) would have the same impacts as Alternative B, but over a larger area. Locating major utilities in a second corridor would provide slight long-term benefits by concentrating environmental impacts; however, there would be moderate long-term adverse impacts at the local level because of increased uses and the need for greater management presence. Impacts from the withdrawal of the OTA Impact Area would be the same as Alternative A.

Conclusion – Lands and Realty – Alternative C

Consolidating land ownership and realigning the boundary would have slight to moderate long-term landscape-wide benefits. Providing a second utility corridor would result in slight to moderate long-term adverse impacts. There would be moderate long-term benefits from the avoidance area at the landscape level. The objective and DFC would be met.

Lands and Realty: Alternative D

Revising the NCA boundary (Lands Map 7) would have the same impacts as Alternative C. Retaining the existing utility corridor (Lands Map 2) and avoidance area (Lands Map 3), withdrawal of the OTA Impact Area, and consolidating land ownership would have the same impacts as Alternative A.

Conclusion – Lands and Realty – Alternative D

Consolidating land ownership and realigning the boundary would have slight to moderate long-term landscape-wide benefits. There would be slight long-term landscape-wide benefits from the avoidance area and utility corridor. The objective and DFC would be met.

4.2.14 Livestock Grazing

Summary

Alternatives A and B would have minimal adverse impacts on livestock grazing. As a result of vegetation treatments, Alternative D would have moderate short-term adverse impacts and moderate long-term benefits. Alternative C has no livestock grazing and would result in high long-term adverse impacts.

Assumptions

- Desirable forage such as native or desirable non-native perennial grasses are generally used by livestock before less desirable forage, such as annual grasses and weeds.
- Fuels management projects that use concentrated livestock grazing to decrease hazardous fuels would have no direct affect on livestock grazing permits.
- Livestock grazing would continue at some level in the OTA Impact Area following withdrawal of the area to the DoD.
- Livestock affected by grazing restrictions or AUM reductions would not be dispersed to other pastures or allotments.
- For discussions about military training, landscape-wide is the entire OTA (and proposed expansion areas), not the entire NCA.
- Short-term impact would be less than the permit life (≤10 years). Long-term impact would be greater than the permit life (>10 years).

How Activities Affect Livestock Grazing Management

Direct Impacts

Idaho Army National Guard Activities

- IDARNG hardened bivouac sites and assembly areas have localized adverse, direct short- and long-term effects on livestock grazing by eliminating forage production and displacing livestock. Vehicle maneuver training and live fire exercises cause short-term disturbance to livestock. IDARNG reduces some of the direct conflicts with livestock grazing by not conducting live fire exercises in the OTA Impact Area during the month of April.

Livestock Grazing Management Activities

- Implementation of S&Gs could result in short-term adverse impacts including changes in frequency, timing, intensity, and duration of livestock use. Potential long-term benefits would include ecological improvements to perennial communities, which would produce more forage or would reduce the potential for restrictions associated with S&Gs.
- Eliminating livestock grazing would result in adverse impacts in the short- and long-term.

Sensitive Resources (SSS and Cultural) Management Activities

- Excluding grazing or restricting the level, duration, or season of livestock grazing in areas with known SSS would have an adverse impact on livestock grazing, short- and long-term, by reducing the acreage of available forage.

Vegetation – Fire Suppression Activities

- An emphasis on protecting SSP populations and shrub communities could result in less emphasis in annual grass areas, thus, resulting in larger fires in non-shrub communities. This loss of forage would cause adverse direct and indirect impacts to livestock in affected areas.
- Following wildfires, ESR activities could close affected allotments or pastures, resulting in additional short-term direct adverse impacts to grazing from reduced forage.

Vegetation – Fuels Management Activities

- Hazardous fuels accumulations, extended fire seasons, and increased connectivity of fuels have resulted in larger, more severe wildfires with shorter intervals between fires (USDI 2000a; Klemmedson and Smith 1964). Fuel breaks and fuels reduction projects would be used to reduce the amount and continuity of hazardous fuels. These projects would have a short-term, adverse direct impact on livestock grazing by excluding livestock until the treated areas have adequately responded to the fuels treatments. These site-specific impacts would vary by type, size and location of the fuels management project.

Vegetation – Research Areas

- Research set asides would have a adverse, localized, direct impact, short- and long-

term, on livestock grazing by excluding use within the affected sites and reducing overall available forage.

Vegetation - Restoration Activities

- Research set asides would have a adverse, localized, long-term direct impact on livestock grazing by excluding use within the affected sites and reducing overall available AUMs.
- Restoration projects would have direct short-term adverse impacts on livestock grazing by reducing available forage in affected allotments or pastures during post-treatment rest and deferment periods.

Indirect Impacts

Idaho Army National Guard Activities

- Military training-related disturbance of soils and vegetation (see Upland Vegetation) have an adverse, indirect affect on livestock grazing, short- and long-term, by reducing available forage. However, IDARNG fire fighting responsibilities benefit livestock grazing indirectly by reducing potential landscape-scale loss of forage from wildfires.

Riparian/Wetland Management Activities

- Actions taken to maintain or improve riparian plant communities would have an adverse short-term indirect impact on livestock grazing through reductions in livestock numbers and restrictions in seasons and durations of grazing along the riparian corridor. In the long-term, riparian area improvements could result in localized increases in livestock stocking rates and or changes in seasons or durations of use.

Sensitive Resources (SSS and Cultural) Management Activities

- Restrictions associated with SSS could cause short- or long-term adverse, impacts on livestock grazing by constraining opportunities for the construction of rangeland management projects (i.e. fences, cattleguards, etc.). In the absence of these range projects, livestock could potentially degrade upland or riparian plant communities to a point that would require restrictions, exclusions, or reduced AUMs. The result would be a long-term adverse, indirect impact on livestock grazing. However, localized restrictions and exclosures associated with known occurrences of SSS could also have a long-term beneficial affect on livestock grazing. By protecting these sites from livestock grazing impacts, future ESA listings or conservation agreements, which could restrict or exclude livestock grazing in all potential habitats associated with the species, could be prevented; therefore, future restrictions, exclusions, or AUM reductions could be averted.

Vegetation – Fuels Management Activities

- Decreasing the amount or continuity of fuels would potentially reduce the size and severity of future fires, thus reducing forage loss. Limiting the size of wildfires would have a beneficial, short-term indirect impact on livestock grazing by decreasing potential AUM reductions associated with post-fire rest and deferment periods. Furthermore, if fuels projects increased the intervals between fires, native or desired plant communities would have more time to regenerate or reestablish, which would have a long-term, beneficial indirect effect of increasing desirable forage production. Since perennial forage production fluctuates far less than annual forage production, permittees would be provided a more predictable and reliable forage base on which to depend.

Vegetation – Research Areas

- There could be a potential long-term indirect beneficial impact if research conducted in these research areas provided information that could improve the methods used to effect improvements in vegetation community ecological condition and associated forage production.

Vegetation – Noxious Weeds Management

- Weed treatment programs that reduce noxious weeds would have a short- and long-term term beneficial, indirect impact on livestock grazing by reducing populations of unpalatable or toxic species. Weed treatments that limit the structural and functional alteration of desirable plant communities and reduce competition with desirable forage species would have short- and long-term beneficial, indirect affects on livestock grazing by increasing available forage. However, noxious weed treatments could have short-term adverse, indirect affects on livestock grazing by adversely affecting non-target desirable plant species, thereby reducing short-term forage production and availability. Treatment-related losses of desirable forage species could also have a long-term adverse, indirect impact by limiting the reproductive population of native or desirable plants; thereby, reducing a site's ability to resist disturbance or naturally reestablish, which could lead to future livestock grazing restrictions, exclusions, or reduced AUMs.

Vegetation – Restoration Activities

- Restoration would have a long-term, beneficial indirect affect on livestock grazing by improving the ecological condition of the treated pasture(s), which would help to increase and stabilize the forage base. Actively seeding an area can supplement native seed sources, thereby enhancing missing components of the plant community. Thus, potential grazing reductions associated with resting restored areas could be reduced, since active restoration would effect change much quicker than natural regeneration (Vallentine 1989). Restoration of the structural and functional components of degraded sites (see upland vegetation) could increase the overall long-term production of desirable forage, and the ability of the vegetation community to resist less desirable invasive species (Yensen 1981, pp 177-179; Young and Evans 1978, pp 284-287). Restoration activities that increase a site's ability to resist disturbances or naturally reestablish after a disturbance could decrease the amount of time livestock grazing would be reduced following restoration.

Visual Resource Management Activities

- Areas classified as VRM Class I could have long-term adverse effects on livestock grazing by limiting BLM ability to use range management tools, such as fences, water and salt placement, etc., that would limit grazing-related impacts to soils, vegetation, wildlife, etc. Without these management tools, sites could become degraded, which could result in seasonal restrictions or AUM reductions.

Discussion of Impacts by Alternative

Livestock Grazing: Alternative A

Idaho Army National Guard Activities: Military training activities in the OTA affect approximately 30% of the Sunnyside Spring/Fall and Sunnyside Winter allotments. Because these are large allotments, permittees have greater flexibility in adjusting to potential impacts from training activities. There would be slight long-term localized adverse impacts from the seasonal conflicts with military activities in the Impact Area. These impacts occur predominantly in April.

Livestock Grazing Management Activities: Implementing S&Gs would result in slight to moderate localized adverse impacts in the short-term and slight long-term benefits in perennial communities. There would be negligible benefits in annual communities. Approximately 3,900 acres would be closed to livestock grazing along the Snake River (Grazing Map 4) and would result in a negligible long-term adverse impact of less than 400 AUMs at the local level.

Riparian/Wetland Management Activities: Riparian and wetland treatments (1 mile) would have negligible adverse short-term localized impacts.

Sensitive Resources (SSS and Cultural) Management Activities: Where grazing is restricted (19,400 acres) to protect sensitive resources, there would be a moderate localized adverse impact over the long-term. If the sensitive resources occur across the landscape, as with slickspot peppergrass, the impacts would be slight and landscape-wide over the long-term.

Vegetation – Fire Suppression Activities: Because non-shrub areas are widespread and account for approximately 60% of the NCA, emphasizing fire suppression in SSP habitat and remnant shrub communities could have a slight to moderate long-term adverse impact at the landscape level by allowing more acres of annual grassland to burn.

Vegetation – Fuels Management Activities: The limited acreage to be treated (2% of the NCA) would cause localized short-term adverse and long-term beneficial impacts.

Vegetation – Noxious Weeds Management Activities: Noxious weed treatments would have slight localized short-term benefits. Because noxious weeds would likely increase over the long-term, there could be slight to moderate long-term adverse impacts at the landscape level.

Vegetation – Restoration Activities: Habitat restoration treatments would result in slight short-term adverse and slight long-term beneficial impacts primarily in the Sunnyside Spring/Fall and Sunnyside Winter allotments.

Visual Resource Management Activities: VRM I classification would have negligible adverse impacts. There would be no impacts from the other VRM classifications.

Conclusion – Livestock Grazing – Alternative A

The long-term landscape-wide benefits of implementing S&Gs would be slight in perennial communities and negligible in annual communities. Activities that protect or enhance special resources would have moderate short- and long-term moderate localized impacts. Impacts with military activities would be moderate and localized. The objective and DFC would be met.

Livestock Grazing: Alternative B

Idaho Army National Guard Activities: There would be increased military training-related impacts to livestock grazing compared to Alternative A. Due to current IDARNG training restrictions, there would be few if any additional military training-related impacts to grazing in the OTA Bravo Area. However, short-term localized adverse impacts to livestock grazing would be increased in five grazing allotments that are affected in whole or in part by the 20,400 acre expanded Maneuver Area, since military training would occur while livestock are also using the area. To facilitate vehicle maneuvers, some pasture and allotment fences would be removed or relocated, which would cause slight to moderate localized long-term adverse impacts.

Livestock Grazing Management Activities: Impacts would be the same as Alternative A, except approximately 800 AUMs would be eliminated or seasonally restricted on an additional 4,700 acres (Grazing Map 5).

Riparian/Wetland Management Activities: Because much of the riparian area is not available for livestock grazing, improving these areas (up to 20 miles) would have slight short-term adverse and slight long-term beneficial impacts at the local level.

Sensitive Resources (SSS and Cultural) Management Activities: The impacts would be the same as described in Alternative A.

Vegetation – Fire Suppression Activities: The impacts would be the same as described in Alternative A.

Vegetation – Fuels Management Activities: Based on the number of acres affected (up to 70,000 acres) there would be slight to moderate short-term adverse and long-term beneficial impacts at the local level.

Vegetation – Noxious Weeds Management Activities: Noxious weed treatment (approx 2,500 acres per year) would result in slightly beneficial localized short-term impacts.

Vegetation – Research Areas: Setting aside 1,000 acres for research would have negligible localized short- and long-term adverse impacts to livestock grazing by closing this area to grazing. However, if research is successful, it could have slight to moderate long-term beneficial impact.

Vegetation – Restoration Activities: Impacts would be the same as described in Alternative A except that a larger area would be restored (up to 50,000 acres). There would be a slight to moderate short-term loss of up to 4,400 (15%) actual use AUMs as a result of post-treatment rest and deferment periods following habitat restoration and rehabilitation projects. Following rest and deferment periods, there would be moderate to high long-term improvement in forage production and stability at the landscape level.

Visual Resource Management Activities: With no sites being classified as VRM Class I or II, there would be no impact to livestock grazing.

Conclusion – Livestock Grazing – Alternative B

Implementing S&Gs would be slightly beneficial in perennial and riparian communities over the long-term and would have negligible impacts in annual communities. Activities that protect or enhance special resources would have moderate short- and long-term localized impacts. Vegetation treatments would have moderate short-term adverse impacts at the local level and moderate long-term beneficial impacts at the landscape level. The objective and DFC would be met.

Livestock Grazing: Alternative C

Eliminating grazing, with the exception of intensively managed grazing for fuels management, would highly adversely affect livestock grazing at the landscape level.

Conclusion – Livestock Grazing – Alternative C

Eliminating grazing would be highly adverse over the short- and long-term at the landscape level. The objective and DFC would not be met.

Livestock Grazing: Alternative D

Idaho Army National Guard Activities: Impacts would be the same as described in Alternative A; however, the 4,100-acre (IDARNG Map 5) expansion area would occur only in the Sunnyside Spring/Fall allotment.

Livestock Grazing Management Activities: Impacts would be the same as described in Alternative A.

Riparian/Wetland Management Activities: Impacts would be the same as described in Alternative B.

Sensitive Resources (SSS and Cultural) Management Activities: Impacts would be the same as described in Alternative A.

Vegetation – Fire Suppression Activities: Impacts would be the same as described in Alternative A.

Vegetation – Fuels Management Activities: Impacts would be the same as described in Alternative B but would occur over an additional 30,000 acres.

Vegetation – Noxious Weeds Management Activities: Noxious weed treatment (approx 4,000 acres per year) would result in moderate landscape-wide beneficial long-term impacts.

Vegetation – Research Areas: Impacts would be the same as described in Alternative B but would occur over a total of 5,000 acres.

Vegetation – Restoration Activities: Restoring 130,000 acres would moderately adversely affect forage availability at the landscape level in the short-term, but would provide moderate

long-term benefits through increased perennial forage production and stability.

Visual Resource Management Activities: Impacts would be the same as described in Alternative B.

Conclusion – Livestock Grazing – Alternative D

Implementing S&Gs would provide slight long-term beneficial impacts in perennial and riparian communities and negligible impacts in annual communities. Activities that protect or enhance special resources would have moderate short- and long-term localized impacts. Vegetation treatments would have moderate short-term adverse impacts and moderate to high long-term beneficial impacts at the landscape level. The objective and DFC would be met.

4.2.15 Mineral Resources

4.2.15.1 Leasable Minerals

The NCA-enabling legislation withdrew the area from locatable and leasable mineral entry and disposal. Therefore, leasable minerals are not an issue in the NCA. See section 2.2.15.2 of the Affected Environment Chapter 2.

4.2.15.2 Mineral Materials

Summary

Alternatives A and D would fully meet their identified objectives by continuing to authorize mineral material sales and free use permits in existing active and inactive sites to the extent compatible with the NCA-enabling legislation. Alternatives B and C would limit mineral material sales and free use permits to existing active sites, and therefore, would only partially meet the objectives.

Assumptions and Elements of the NCA Legislative Withdrawal.

- There are no existing mining claims and no new claims may be located.
- No new mineral material sites can be established.
- No mineral leases can be authorized within the NCA.
- Criteria for determining impacts are different for mineral materials than for other renewable resources. Management actions would have much less of an impact on the resource that on the opportunities to use the resource, therefore discussion of impacts from mineral materials is discussed in the Socio-Economics Section 4.2.22 of this chapter.
- Short-term impacts are those that occur when the site is active. Long-term impacts would be those that are apparent 10 years after the site is closed.

How Activities Affect Mineral Resources

- None

Discussion of Impacts by Alternatives

Mineral Materials: Alternatives A and D

The existing 3 open cinder sites could be increased by 3 that are currently not in use and the existing 15 open sand and gravel sites could be increased by opening 18 inactive sites. In addition, 2 currently inactive rock sites and approximately 9 other inactive sites of various types could be made available. The two existing open clay sites would also be available. Based on the enabling legislation, when materials are depleted from these sites, no additional areas would be opened. There would be no adverse or beneficial impact to the minerals program. Other impacts are discussed by resource (i.e., surface disturbing activities in Fish and Wildlife, Soils, SSPs, etc.). Impacts to the users of mineral resources are discussed in Socio-Economic Section 4.2.22.

Conclusion – Mineral Materials – Alternatives A and D

Maximizing compatible mineral material development would have no impacts to the availability of mineral materials. The objective would be met. No DFC was identified.

Mineral Materials: Alternatives B and C

Mineral material extraction would only be authorized from active sites, which consist of 3 cinder, 2 clay, and 15 sand and gravel sites. When materials are depleted from these sites, no additional areas would be opened resulting in a net reduction of available mineral materials. Other impacts are discussed by resource (i.e., surface disturbing activities in Fish and Wildlife, Soils, SSPs, etc.). Impacts to the users of mineral resources are discussed in Socio-Economic Section 4.2.22.

Conclusion – Mineral Materials – Alternatives B and C

Authorizing mineral material extraction from existing open sites would have slight adverse impacts on the availability of mineral materials. The objective would be met. No DFC was identified.

4.2.15.3 Locatable Minerals

The NCA-enabling legislation withdrew the area from locatable and leasable mineral entry and disposal. Therefore, locatable minerals are not an issue in the NCA. See Section 2.2.15.4 in the Affected Environment Chapter 2.

4.2.16 Recreation

Summary

Also see section 4.3.14 – Transportation

- The recreation objectives would be met under each alternative over the short-term. Insufficient recreation facilities in Alternative A would not meet increased user demands over the long-term, due to population growth.
- The DFC would not be met in Alternative A because unmitigated environmental impacts associated with recreation would increase over the long-term. Alternative B addresses projected user demand conflicts with more intensive management than Alternative A and would meet the DFC. Alternatives C and D would each meet their respective objectives and DFC.
- Each alternative provides varying degrees of restoration, hazardous fuels reduction and recreation management, which will all affect the recreational experience. These activities generally result in long-term benefits at the cost of short-term adverse impact to the recreation experience. Each alternative provides different opportunities for motorized recreation opportunities; however, these differences are insignificant across the landscape. Alternative A would have the greatest emphasis on motorized recreation, while Alternative C would provide the most non-motorized opportunities. Alternative D provides the greatest range of recreational opportunities and balances this with the greatest amount of vegetation restoration
- Under Alternatives B and C, various stretches of the Snake River would be recommended for recreational classification under the W&SR Act. Alternative C would recommend more than twice as many river miles for classification as Alternative B. No recommendations would be made under Alternatives A and D.

Assumptions

- Recreation use would increase in correlation with population growth over the next 20 years, meaning that the number of recreation visits would increase significantly. Growth in the area has increased over 45% in the last ten years and this number will continue to go up at an even greater rate.
- For purposes of analysis, the ROS acres for semi-primitive motorized and roaded natural are combined into roaded natural.
- Short-term impact would be four years or less. Long-term impact would be greater than four years.

How Activities Affect Recreation Management

Direct Impacts

Recreation – Campfire Restrictions

- Campfire restrictions would limit the recreational experiences for some individuals. Limiting campfires to established campsites or metal fire pans would improve the visual nature of the area by lim-

iting the appearance of fire rings and ashes on the landscape.

Recreation – Facilities Development

- The primary adverse impacts are increased localized surface disturbance associated with the construction of new facilities. Adverse impacts to localized areas would increase somewhat by concentrating use in the area of development. Properly developed use "hardens" part of the area to contain the impacts from surface disturbance with the goals of protecting the surrounding area and meeting user demands. Constructing new recreation facilities would cause short-term impacts to the visual quality of the affected area by disturbing soils and vegetation, and disrupting wildlife.

Recreation – Shooting Restrictions

- Shooting restrictions reduce opportunities for recreational shooting, thus concentrating shooters into smaller areas outside of the restricted areas.

Riparian and Wetlands Management Activities

- Maintaining and improving riparian and wetland areas would attract wildlife and improve related recreation opportunities, such as fishing, wildlife viewing, birdwatching and hiking in the short- and long-term at the affected sites. If affected areas are fenced during restoration, the areas would.
- Sensitive Resources (SSS and Cultural).

Transportation Area Designations and Route Designation Criteria

- Because of the NCA enabling legislation there are no "open" areas in the NCA.
- Designating areas as closed to motorized vehicles would have direct adverse effects to motorized recreation. Restricting vehicles to designated routes would beneficially affect dispersed non-motorized recreation that normally occurs off-road, such as hiking, backpacking, horseback riding, and wildlife viewing.
- Application of the route designation criteria within the limited to designated areas will have slight adverse impacts to motorized use in or around areas containing sensitive resources but will have slight beneficial long-term impacts by eliminating conflicts and providing a range of recreation opportunities.

Fuels Management and Habitat Restoration Activities

- Mechanical treatments would disturb soil and vegetation and reduce recreational and scenic quality in the short-and long-term.
- Access closures would reduce recreation opportunities and displace recreation in the long-term.

Indirect Impacts

Idaho Army National Guard Activities

- Increased interactions and conflicts between the recreating public and military training pose public safety concerns in the OTA and displace recreational activities.

Livestock Grazing Management Activities

- Eliminating or restricting livestock grazing to seasons when recreation use is lower would decrease human/livestock encounters, which would enhance primitive recreation opportunities in the short-term. Depending on the individual and the setting, livestock encounters could be either beneficial or adverse.

Recreation – Campfire Restrictions

- Between 1980 and 2004, human caused fires were responsible for 70% of fire ignitions that burned 30% of the NCA. A change in campfire regulations could help reduce one component of human-caused fires that accounted for 4% of fire starts and 10% of the acres burned. Campfire restrictions would decrease the likelihood large wildfires that impair the scenic quality of the landscape.

Recreation – Facilities Development

- Expanding or constructing new recreation facilities would provide additional recreation opportunities and attract increased recreation use from adjacent areas.
- Hardened facilities would focus use to less sensitive areas, and would increase opportunities for public education, public safety, and enforcement efforts.

Recreation – Shooting Restrictions

- Shooting restrictions reduce impacts to dispersed forms of recreation, such as hiking, backpacking, and nature viewing due to less user conflict and safety concerns which would lead to short- and long term beneficial impacts.

Riparian and Wetlands Management Activities

- Restricting recreation developments within ¼ mile of occupied sensitive plant habitat would not likely meet increased user demands. However, non-consumptive recreation, including hiking, backpacking, and wildlife viewing would be enhanced at the landscape level. Opportunities for interpretation of sensitive resources, including the Oregon Trail could have beneficial impacts.

Special Designations – Special Recreation Management Areas (SRMAs)

- SRMAs are designated for the purpose of protecting important resources, including recreational, scenic, and cultural values and opportunities, especially in areas that warrant more intensive management because of higher levels of recreation use and conflict. SRMA designation focuses beneficial short-and long-term management and funding on high use areas, helping to protect sensitive resources through public outreach and education, site development, and road and trail construction and maintenance; concentrating recreation use in areas best suited for that use; and providing effective enforcement and emergency response.

Special Designations – Wild and Scenic Rivers

- Recommending that segments of the Snake River are suitable for designation as Recreational Rivers under the W&SR Act would place heightened emphasis on the management and protection of the outstandingly remarkable values contained in the recommended segments, including wildlife viewing opportunities and scenic values. The recommendation would protect recreational opportunities by minimizing the potential for the free-flowing nature of the river to be altered creating a beneficial short-and long-term direct impact.

Transportation Area Designations and Route Designation Criteria

- Designating closed areas and restricting vehicles to designated routes would beneficially affect recreation indirectly by reducing disturbance to soils, biological crusts, and vegetation, and helping curtail the spread of invasive and noxious weeds, which would improve raptor prey habitat, help stabilize raptor populations, and increase wildlife viewing opportunities.

Fuels Management and Habitat Restoration Activities

- Successful habitat restoration and fuels treatment projects could attract additional recreation use, and result in higher levels of recreation-related impacts including, vegetation trampling, wildlife disturbance, and human-caused fire.

Visual Resource Management

- VRM classifications that limit surface disturbing and visually intrusive recreation developments would indirectly limit recreational uses and activities normally associated with these developments. Restrictions on recreational developments in VRM Class I and II areas would beneficially affect individuals who are seeking opportunities for semi-primitive non-motorized recreation. However, restricting the development of new roads, trails or fa-

cilities would reduce available recreational opportunities for those who would use and benefit from these improvements. VRM Classes III and IV would not impact recreation.

Discussion of Impacts by Alternatives

Recreation: Alternative A

Idaho Army National Guard: Military training would displace recreational activities resulting in slight localized short-term adverse impacts. Military activities and associated impacts to soils and vegetation in the OTA would cause slight short- and long-term adverse impacts to visual quality for those seeking a more primitive and undisturbed recreational experience.

Livestock Grazing Management: Closures to livestock grazing on 3,900 acres would slightly benefit recreation in the short- and long-term at the local level by eliminating the possibility of user conflicts with livestock.

Recreation – Facilities Development: A lack of new recreation facilities would not meet the projected increase in demand resulting in slight to moderate adverse impacts in the short- and long-term at the local and landscape levels. Managing and improving the three existing watchable wildlife sites would have slight localized benefits over the short- and long-term.

Recreation – Shooting Restrictions: Recreational shooting restrictions would have slight adverse impacts at the local level; however, there would be slight to moderate long-term benefits from reduced conflicts with other dispersed recreation activities.

Riparian and Wetlands: Improving riparian habitat (1 mile) would have negligible impacts.

Sensitive Resources (SSS and Cultural): Restrictions on use and development near occupied SSS habitat and cultural sites would have a slight short- and long-term adverse impact at the local level.

Special Designations – SRMAs: The overlapping SRMAs would provide negligible benefits.

Special Designations – Wild & Scenic Rivers: Continuing to protect outstandingly remarkable values and free flowing conditions along portions of the 49 free-flowing miles of the Snake River that flow through public lands would have slight short-term beneficial impacts to river-based recreation by protecting the values and conditions on three of the four free-flowing segments. The fourth segment is bordered on both sides almost exclusively by private lands over which BLM has no legal or regulatory control.

Transportation: Application of the route designation criteria could have moderate adverse localized impacts to motorized vehicle users in the short- and long-term.

Vegetation – Fuels Management: There would be slight short-term adverse impacts from treating 10,000 acres (2% of the NCA) primarily in Management Area 1. Successfully treated areas would slightly enhance recreational experiences and opportunities in the long-term at the local level.

Vegetation – Restoration: Slight short-term adverse impacts from treating 10,000 acres (2% of the NCA) would occur primarily in Management Area 1. Successfully treated areas would enhance recreational experiences and opportunities moderate in the long-term at the local level.

Visual Resource Management: The recreational experience for those seeking solitude in a more natural setting would be enhanced through more restrictive VRM Classifications (Class I and II) in approximately 31,700 acres along the Snake River corridor (VRM Map 1). Conversely, these classifications would result in moderate localized adverse impacts on recreational development over the long-term.

Conclusion – Recreation – Alternative A

Recreational developments would not keep up with demand, which would result in moderate to high landscape-wide adverse impacts over the long-term. Vegetation treatments, VRM classifications, application of route designation criteria, and livestock closures would have slight long-term benefits at the local level. The objectives and DFC would be met.

Recreation: Alternative B

Idaho Army National Guard: Impacts would be the same as discussed in Alternative A except the area would include an additional 20,400 acres in an area that gets dispersed recreational use. Restrictions on maneuver training in the 22,300 acre Bravo Area would slightly decrease military activity, which would have slight beneficial short- and long-term beneficial impacts to dispersed recreation.

Livestock Grazing Management: Closures (7,300 acres) and seasonal restrictions (1,300 acres) to livestock grazing (Grazing Map 5) would moderately benefit recreation in the short- and long-term at the local level by eliminating the possibility of user conflicts with livestock.

Sensitive Resources (SSS and Cultural): Impacts would be the same as discussed in Alternative A.

Recreation – Campfire Restrictions: Restricting campfires to improved sites would cause slight long-term adverse impacts. The restriction, however, would have slight short- and long-term beneficial impacts due to a reduction in wildfires.

Recreation – Facilities Development: Proposed recreation facilities would not meet the projected increase in demand resulting in slight to moderate adverse impacts in the long-term at the local and landscape levels. Managing and improving the three existing watchable wildlife sites would have the same impacts as discussed in Alternative A.

Recreation – Shooting Restrictions: Recreational shooting restrictions would have moderate adverse impacts at the landscape level; however, there would be moderate long-term beneficial impacts from reduced conflicts with other dispersed recreation activities.

Riparian and Wetlands: Improving riparian habitat (20 miles) would have a slight to moderate beneficial impact at the local level in the long-term.

Special Designations – SRMA: Four (4) SRMAs, totaling about 56,500 (Recreation Map 2) would have moderate beneficial long-term impacts through restrictions imposed to protect resource values and reduce user conflicts.

Special Designations – WSR: Recommending 22 miles of eligible river as suitable for recreational classification under the National W&SR Act (Recreation Map 11) would have moderate short- and long-term beneficial impacts on river-based recreation (if it is approved by Congress) by the mandatory protection of identified values.

Transportation: Application of the route designation criteria would be the same as discussed in Alternative A. Closing 6,400 acres along the Snake River Canyon would have moderate long-term benefits to non-motorized recreation at the local level and slight long-term adverse impacts to motorized recreation.

Vegetation – Fuels Management: Moderate short-term adverse impacts from treating 70,000 acres (15% of the NCA) would occur primarily in Management Areas 1 and 2. Successfully treated areas would moderately enhance recreational experiences and opportunities in the long-term at the landscape level.

Vegetation – Restoration: Moderate short-term adverse impacts from treating 50,000 acres (10% of the NCA) would occur primarily in Management Areas 1 and 2. Successfully treated areas would moderately enhance rec-

reational experiences and opportunities in the long-term at the landscape level.

Visual Resource Management: Since there would be no areas classified as VRM Class I or II, there would be no impacts.

Conclusion – Recreation – Alternative B

Insufficient recreational developments would result in moderate adverse landscape wide impacts over the long-term; however the two new sites would have moderate long-term beneficial impacts at the local level. Vegetation treatments, restrictions on military training in the Bravo Area, and the application of route designation criteria would have slight to moderate long-term benefits at the landscape level. Livestock and/or motorized vehicle closures would have moderate long-term benefits at the local level to river-based recreation. Motorized vehicle closures would have slight long-term localized adverse impacts to motorized recreation. The objectives and DFC would be met.

Recreation: Alternative C

Idaho Army National Guard: Military activities and associated impacts to soils and vegetation in the OTA would cause slight short- and long-term adverse impacts to visual quality for those seeking a more primitive and undisturbed recreational experience. Restrictions on maneuver training in the 22,300 acre Bravo Area would significantly decrease military activity, which would have slight beneficial short- and long-term beneficial impacts to dispersed recreation.

Livestock Grazing Management: There would be slight localized beneficial short- and long-term impacts associated with no livestock grazing on public land. Recreation user conflicts associated with livestock use would be eliminated. For visitors who enjoy viewing livestock on public land, this opportunity would be lost. Slight localized short-term adverse impacts to recreation would result from unmaintained fences that would impede access and cause visual intrusions for dispersed recreational activities.

Recreation – Campfire Restrictions: Impacts would be the same as those described under Alternative B.

Recreation – Facilities Development: Impacts to recreation would be similar to those described in Alternative B. Dedication Point and Cove Recreation Site would be maintained and expanded as needed, which would have the slight beneficial short-term effect of meeting recreational expectations and opportunities at these sites. Four additional sites would be developed, with Kuna Butte, Initial Point, Celebration Park Annex, and Three Pole being possible locations, which would have the slight beneficial long-term effects of meeting expected future demands for developed recreation facilities at the local level.

Recreation – Shooting Restrictions: Impacts would be the same as described under Alternative B.

Special Designations – SRMA: Because of the proposed NCA boundary realignment, the 6,300-acre Owyhee Front SRMA would no longer be part of the NCA, but would be managed by the Owyhee Field Office under the Owyhee RMP (USDI 1999b). This would be slightly beneficial at the local level to motorized vehicle recreation by allowing the existing use to continue in the long-term. The designation of four SRMAs, totaling 56,500 acres, would have the same impacts discussed under Alternative B, but the impacts would be smaller in scope.

Special Designations – WSR: Recommending 49 miles of eligible river as suitable for recreational classification under the National W&SR Act (Recreation Map 12) would (if approved by Congress) have a slight beneficial long-term impact on recreation by managing the area to protect recreational values.

Transportation: The 13,200 acres closed to motorized vehicles would result in moderate

short- and long-term adverse impacts to motorized recreation and moderate beneficial short- and long-term impacts to non-motorized recreation activities. Although the acres limited to designated routes would be the least of all the alternatives, the differences are negligible, and the impacts would be the same as those described for Alternative B.

Vegetation – Fuels Management: About 100,000 acres (21%) of the NCA would be treated to reduce hazardous fuels and to maintain existing fuel breaks. In the long-term, a general reduction in annual and invasive plants and an increase in perennial species would have a slight landscape-wide beneficial long-term impact on dispersed recreation.

Vegetation – Habitat Restoration: About 130,000 acres (27%) of the NCA would be restored. In the short-term, adverse impacts to existing scenic quality and recreation opportunities would be slight and relatively small acreages would be unavailable to recreational use at any given time as a result of public use closures imposed to allow recovery of treated areas. Over the long-term, because it is anticipated that an additional 15,000 acres of shrubs would be lost to wildfire during the same period that 130,000 acres are being restored, scenic quality, the abundance and diversity of recreation opportunity, and the quality of recreation experiences would benefit moderately over the long-term at the landscape-level.

Visual Resource Management: Impacts would be the same as described for Alternative B.

Conclusion – Recreation – Alternative C

Vegetation treatments, restrictions on military training in the Bravo Area, and elimination of livestock grazing would all have slight landscape-wide long-term beneficial impacts. Four additional recreation facilities would have slight long-term localized beneficial impacts by meeting the increasing recreational demand. The recommendation for W&SR designation would have slight localized long-term benefits. The 13,200 acres closed to motorized recreation would have the slight long-term beneficial impact of meeting a greater range of recreational opportunities but would also have slight long-term adverse impacts to motorized recreation. The objectives and DFC would be met.

Recreation: Alternative D

Idaho Army National Guard: Impacts would be the same as Alternative B except the area would be smaller, thus the localized impact would be slight over the long-term.

Livestock Grazing Management: The impacts to recreation would be similar to those described under Alternative A. However, the intermittent grazing of 3,400 acres on Kuna Butte would provide slight short-term very localized adverse impacts to recreation from increased conflicts between livestock and recreation users, since the current grazing permittee has used this area only one time in the past 25 years.

Recreation – Campfire Restrictions: Impacts would be the same as those described under Alternative B.

Recreation – Facilities Development: The impacts would be the same as alternative B except the three additional sites would provide greater localized benefits in the long-term.

Recreation – Shooting Restrictions: Impacts from enlarging the Plateau shooting restriction area would be the same as discussed for Alternative B, except that the impacts would be limited to the northern portion of the OTA.

Special Designations – SRMA: Impacts would be the same as described under Alternative C.

Special Designations – WSR: Determining the river as not suitable and not recommending the river segments for National W&SR designation would have similar impacts to those described under Alternative A, provided that outstandingly remarkable values and free flowing conditions would continue to be protected on 49 miles of the Snake River.

Transportation: Limiting or closing areas to motorized vehicle use would have the same impacts as described for Alternative B, with the exception that there would be about 2,000 fewer acres closed under Alternative D. This localized difference would have negligible short- or long-term impacts landscape-wide.

Vegetation – Fuels Management: Impacts would be the same as described for Alternative C.

Vegetation – Restoration: Impacts would be the same as described for Alternative C.

Conclusion – Recreation – Alternative D

The seven recreation facilities would have moderate localized long-term beneficial impacts by meeting the future recreational demand. Restrictions on military training in the Bravo Area would have slight long-term beneficial impacts. The intermittent grazing of the Kuna Butte area would have slight short-term adverse impacts to recreation when it is being used for grazing. The amount of vegetation treatments would result in slight short-term localized adverse impacts and slight long-term landscape-wide beneficial impacts. The objectives and DFC would be met.

4.2.17 Renewable Energy

Renewable energy is not an issue in the NCA. See Lands and Realty Section 2.2.13 in the Affected Environment Chapter 2 and Alternatives considered but not analyzed in Chapter 3.

4.2.18 Transportation

Summary

All four alternatives would meet their identified objectives. Alternative A would place the greatest emphasis on motorized access to the NCA. Alternatives B, C, and D would still place a large emphasis on motorized recreation opportunities, but would place more emphasis on providing additional areas for non-motorized opportunities. Alternative C would provide the greatest diversity of recreation opportunity.

Assumptions

- Under all alternatives, vehicle access would be preserved to most areas of the NCA.
- Designation of individual routes would not be a part of this RMP process; however, area designations of open, limited or closed would be made, as would the criteria for making future individual route designations.
- The route designation process would result in the loss of some routes, but could also result in the addition of some new routes.
- Except for the OTA Impact Area, which is recommended for withdrawal to the DoD, routes designated for use by the IDARNG would be considered part of the general transportation system, and would be available for general public use.
- The IDARNG would be authorized to conduct off-road maneuver activity that would not be considered part of the transportation system.
- The Impact Area would remain closed to general public access unless individuals are accompanied by IDARNG staff.
- The Route Designation process only affects public lands (not State or private) and all major access roads would remain open.
- Short-term impact would be 4 years or less based on the minimum time needed to protect vegetation treatment projects. Long-term is greater than 4 years.

How Activities Affect Transportation Management

Direct Impacts

Sensitive Resources (SSS and Cultural) Management Activities

- The existence of SSS habitat or cultural resources would have direct long-term adverse impacts on route locations and designations by closing routes or restricting their use in some manner.
- Transportation Area Designations and Route Designation Criteria.

Transportation Management Activities

- Because of the NCA enabling legislation there are no "open" areas in the NCA.
- Areas identified as "limited to designated" provide the greatest opportunity for a range of recreational experiences and transportation needs. The application of the route designation criteria to make these determinations could have short-term adverse impacts; however, because of the increased flexibility, there could be long-term landscape-wide beneficial impacts.
- Areas identified as "closed" have high adverse impacts on transportation. The extent of these impacts would be based on the size of the area closed.
- Application of the route designation criteria within the limited to designated areas will have slight adverse impacts in or around areas containing sensitive resources but will have slight beneficial long-term impacts by eliminating conflicts and providing a range of transportation opportunities.

Vegetation – Habitat Restoration/Fuels Management Activities

- Habitat restoration and fuels treatment projects could have a direct short-term impact on the transportation network and public access through road closures that are implemented for periods of 4 to 10 years to optimize the success of the seeding or replanting.

Indirect Impacts

Recreation Activities

- Recreation Opportunity Spectrum (ROS) identifies a variety of recreational opportunities and experiences. As a part of the ROS classification, route densities are identified in order to provide for motorized and non-motorized experiences. The greater density provides greater transportation opportunities resulting in short- and long-term beneficial impacts.

Utility Corridors Management Activities

- Designation of utility corridors would focus major utility projects within a confined corridor, which would have beneficial short- and long-term impacts on the transportation system by supporting continued vehicle access.

Visual Resource Management (VRM) Activities

- VRM classifications can be used to protect and conserve visual resources by constraining development and/or user-related impacts on the environment. As such, more protective classifications (Classes I and II) could have direct and indirect adverse impacts on the transportation network by restricting locations where roads and trails could be constructed and maintained. While VRM Classes I and II constrain flexibility in the placement of new roads and trails, and associated facilities like loading ramps, signs, kiosks, etc., VRM Classes III and IV provide managers the most latitude to create a transportation system that serves a variety of needs, including increasing recreation pressure. These less restrictive classifications, however, also result in affected areas being more vulnerable to the introduction of discordant structures or activities on the landscape that detract from visual integrity or scenic quality, and thus degrade the aesthetic experience of some users of the transportation network.

Discussion of Impacts by Alternative

Transportation: Alternative A

Sensitive Resources (SSS and Cultural) Management Activities: The identification of sensitive resources and the application of the route designation criteria as they relate to SSS habitat and cultural resources would entail some restrictions on use to protect the affected resource. As such, routes could be closed or limited in some fashion, which would reduce public access opportunities resulting in slight long-term adverse impacts at the landscape level.

Transportation Area Designations and Route Designation Criteria Management Activities: Approximately 1,600 acres are identified as closed which would have slight localized adverse impacts over the short- and long-term. The remaining area is limited to designated routes which would have moderate to high landscape-wide benefits. ROS route designations provide 2.2 miles of roads per square mile which would have moderate landscape-wide beneficial impact to the transportation network.

Utility Corridors: There would be no impact from the existing utility corridor, which is in an area that negligibly benefits the transportation network.

Vegetation – Habitat Restoration/Fuels Management Activities: Up to 20,000 acres of habitat restoration and fuels management projects could be closed or have other restrictions for vehicle use for periods of 4 to 10 years in order to optimize the success of the seedings. Depending on their size, location and duration of closure, they could have slight to moderate short- or long-term localized impacts. Most of these restrictions would be in Management Area 1 or 2, an area that has the highest dispersed recreation use and need for access.

Visual Resource Management Activities: This is the only alternative containing VRM Class I (10,300 acres), which would provide the least flexibility in designing a transportation system to protect natural and cultural resources but provides the greatest protection of natural resources from motorized vehicle use. This would have a slight to moderate long-term localized impact to transportation. About 452,000 acres (93%) of the NCA is designated as VRM Class III or IV, so aside from the 2% of the area protected as VRM Class I, and the 21,400 acres (4%) of the NCA protected under VRM Class II, most of the area is not adversely impacted by VRM designations. There are no impacts to transportation from VRM Classes III or IV.

Conclusion – Transportation – Alternative A

The designation of approximately 1,600 acres (less than 1% of the NCA) as closed to motorized vehicle use provides for moderate to high localized long-term motorized vehicle opportunities with moderate to high adverse impacts to non-motorized vehicle activities. The area identified as limited to designated routes (431,200 acres) would have highly beneficial landscape-wide impacts. Designating (10,300 acres or about 2% of the NCA) as VRM Class I would result in moderate to high adverse localized impacts over the long-term. Vegetative treatments would result in short-term localized adverse impacts. The NCA-wide route density of 2.2 miles per square mile would result in moderate landscape-wide beneficial impacts. The objective and DFC identified under Recreation (See Section 4.2.16.) would be met.

Transportation: Alternative B

Sensitive Resources (SSS and Cultural) Management Activities: Impacts would be the same as described for Alternative A.

Transportation Area Designations and Route Designation Criteria Management Activities: Approximately 6,400 acres are identified as closed which would have slight localized adverse impacts over the short- and long-term. The remaining area is limited to designated routes (426,400 acres), which would have moderate to high landscape-wide benefits. ROS route designations provide 1.7 miles of road per square mile, which would have moderate landscape-wide beneficial impacts to the transportation network.

Utility and Communication Corridors: The existing utility corridor would be retained, and a new corridor would be designated north of, and parallel to, the Snake River Canyon. New access roads could be created along utility lines within the new corridor to allow for maintenance, and if these new routes were to remain open, they would provide the public with additional recreational access opportuni-

ties resulting in moderate long-term beneficial localized impacts.

Vegetation – Habitat Restoration/Fuels Management Activities: The 120,000 acres affected by habitat restoration and fuels management projects would result in moderate adverse localized impacts due to potential loss or restrictions on public access for periods of 4 to 10 years. There would be no long-term beneficial impacts to the public use of the area following restoration.

Visual Resource Management Activities: The entire area is VRM Class III or IV, which would not impact transportation.

Conclusion – Transportation – Alternative B

The 6,400 acres designated as closed, 120,000 acres of vegetation treatments, and the NCA-wide route density of 1.7 miles per square mile would result in slight long-term landscape-wide benefits by reducing the number of routes, and increasing non-motorized opportunities. The utility corridors would have moderate landscape-wide long-term beneficial impacts. The objective and DFC would be met.

Transportation: Alternative C

Sensitive Resources (SSS and Cultural) Management Activities: Impacts would be the same as described for Alternative A.

Transportation Area Designations and Route Designation Criteria Management Activities: Approximately 13,200 acres are identified as closed which would have moderate to high localized adverse impacts over the short- and long-term. The remaining area (419,600 acres) is limited to designated routes, which would have moderate to high landscape-wide benefits. ROS route designations provide 1.5 miles of road per square mile, which would have moderate landscape-wide beneficial impact to the transportation network over the long-term.

Utility and Communication Corridors: The existing utility corridor would be retained, and the new corridor south of and parallel to Highway 78 would be added. The impacts would be the same as Alternative A because this corridor is near a major highway and does not provide additional transportation opportunities.

Vegetation – Habitat Restoration/Fuels Management Activities: The impacts would be the same as described for Alternative B, except that the 230,000 acres affected by these projects would make the impacts to the transportation system landscape-wide. There would be no long-term impacts to transportation.

Visual Resource Management Activities: Although no areas are in VRM Class I, this alternative designates 39% of the NCA (187,200 acres) in VRM Class II, which would provide a moderate level of protection to the more sensitive and scenic areas along the Snake River and C.J. Strike Reservoir, and in the areas of highest recreational use in the western end of the NCA, while still giving some flexibility in designing a route system. The rest of the NCA would be classified as either VRM Class III or IV, which would have no effect on transportation.

Conclusion – Transportation – Alternative C

The 13,200 acres designated as closed, 230,000 acres of vegetation treatments, and the NCA-wide route density of 1.5 miles per square mile would result in slight long-term landscape-wide adverse impacts by reducing the number of routes. The utility corridors would not impact the transportation system. The objective and DFC would be met.

Transportation: Alternative D

Sensitive Resources (SSS and Cultural) Management Activities: Impacts would be the same as described for Alternative A.

Transportation Area Designations and Route Designation Criteria Management Activities: Approximately 4,400 acres are identified as closed which would have slight localized ad-

verse impacts over the short- and long-term. The remaining area is limited to designated routes (428,400 acres), which would have moderate to high landscape-wide benefits over the long-term. ROS route designations provide 2.0 miles of road per square mile, which would have moderate to high long-term landscape-wide beneficial impact to the transportation network.

Utility and Communication Corridors: Impacts would be the same as identified in Alternative A.

Vegetation – Habitat Restoration/Fuels Management Activities: Impacts would be the same as described for Alternative C.

Visual Resource Management Activities: The impacts would be the same as described in Alternative C; however, there would be fewer acres identified as VRM Class II and more acres as VRM Class III.

Conclusion – Transportation – Alternative D

The 4,400 acres designated as closed would have slight localized adverse impacts and the 428,400 limited acres would have moderate to high landscape-wide beneficial impacts. Approximately 230,000 acres of vegetation treatments would result in moderate to high long-term landscape-wide adverse impacts by reducing the number of routes. The NCA-wide route density of 2.0 miles per square mile would result in moderate to high landscape-wide beneficial impacts. The objective and DFC would be met.

4.2.19 Utility and Communication Corridors (Land Use Authorizations)

(See Lands and Realty Section 4.2.13)

4.2.20 Wildland Fire Ecology and Management

See Vegetation Section 4.2.8

4.2.21 Special Designations

See Recreation Section 4.2.16

4.2.22 Social and Economic Conditions

4.2.22.1 Economic

Summary

All alternatives would meet their identified objectives and the DFC. All alternatives would have a negligible benefit to the regional economy by potentially providing a slight increase in jobs and income. The increase would be primarily associated with recreation and vegetation treatments and would be greatest in Alternatives C and D. With the exception of Alternative A, there would be slight job losses in the military and livestock sectors; however, these would be off-set by gains in other sectors.

Assumptions

General Assumptions

- The NCA does not have a market-based economy; therefore, the direct and indirect impacts are described within a Region where workers and users live (Ada, Canyon, Elmore and northern Owyhee Counties).

Idaho Army National Guard

- Military spending associated with the OTA is a function of the amount of training that can potentially be conducted (area available), the amount of training that is actually conducted, and the types of training that can be conducted (maneuver, ranges, administration and support sites).
- A portion of the support and administrative personnel at Gowen Field are indirectly linked to operations at the OTA. These include personnel associated with maintenance, site administration, environmental monitoring, scheduling, and related personnel operations.
- Military spending for environmental monitoring, road maintenance and habitat rehabilitation is directly linked to military use of the area. Military funds for habitat rehabilitation and monitoring would not be used outside the OTA boundary.
- Concentrating military operations would result in scheduling conflicts for military activities during periods of high demand.

- If the OTA is reduced or if acreage available for maneuvers is reduced, a "substitution effect" would occur. The military would transfer some training from restricted areas to other portions of the OTA. However, this substitution effect is not linear, because not all training could be transferred to the remainder of the OTA.
- Most of the manpower necessary to operate the OTA resides in Southwest Idaho.
- Military personnel would purchase goods and services in the regional economy with a spending pattern similar to other consumers.
- Total economic impact of military operations includes both the direct impact of military spending and employment and the indirect and induced impacts of military spending. The induced impact is the multiplier effect of consumption spending associated with the purchases by military personnel and other government employees required to operate the OTA.

Livestock Grazing

- Actual livestock use would vary from year to year depending on weather and forage conditions.
- Permittees would try to replace lost BLM AUMs rather than reduce herd size.

Recreation

- The proximity of the NCA to the Boise-Nampa-Caldwell area creates a strong demand for dispersed recreation activity.
- The demand for interpretive activities and developed campgrounds and picnic areas is greater than the current supply.
- Demand for outdoor recreation would reflect population growth in the region.
- If outdoor recreation opportunities are limited in the NCA, a "substitution effect" would be evident. This "substitution effect" would be manifested by visitors substituting activities at other similar areas in the region for NCA visits, and in some cases residents would spend their leisure dollars on other activities. A "substitution effect" of 50% was assumed for this analysis.
- Most of the jobs associated with NCA recreation are in the trade and service sectors. This reflects the large proportion of visitor spending for eating and drinking services, food stores and service station.

Vegetation – Fuels Treatments

- Annual acres programmed for fuels treatment would be consistent over the planning period.
- Approximately 40% percent of the expenditures for fuels treatment operations would be labor costs.
- The purchasing pattern (industrial inputs) for fuels treatment will be similar to inputs for other agriculture (miscellaneous crops).
- A significant portion of the seed used for fuels treatment would be purchased from suppliers outside the region.
- Fuels treatment costs would be stable (when adjusted for inflation) throughout the planning period.
- Estimated average cost of $200 per acre for fuels treatment work (based on 2005 costs).

Vegetation – Restoration

- Annual acres programmed for restoration would be consistent over the planning period; however budget allocations may vary from year to year.
- Restoration would be labor intensive with approximately half of the expenditures for payroll.
- The purchasing pattern (industrial inputs) for restoration would be similar to inputs for other agriculture (miscellaneous crops).
- Estimated cost of $150 minimum per acre for restoration work (based on 2005 costs).
- Short-term impacts would be 0–5 years with long-term impacts greater than 5 years because of the dynamic nature of socio-economics.

How Activities Affect Economic Resources

Direct Impacts

Idaho Army National Guard Activities

- IDARNG training capabilities are dependent on the availability of controlled sites within the OTA; therefore, limiting the types or areas available for training (maneuver, artillery, foot, etc.) would have short- and long-term adverse impacts. In contrast, expanding the types or areas available for military training would have beneficial short- and long-term direct impacts.
- The primary economic benefits of military spending are from payroll, maintenance, and construction. Changes (reductions or increases) in military spending would impact the local economy.
- Military specific hardware is acquired via contracting arrangements that result in most of the equipment related spending (military hardware) going outside the Region.

Livestock Grazing Management Activities

- Changes in livestock season or duration of use that result in a reduction in actual use would cause short- and long-term adverse impacts to permittees.

Recreation Management Activities

- Closures or restrictions could adversely affect recreational opportunities by reducing the overall area available for a specific use. However, the quality of other recreational experiences could be enhanced and user conflicts could be reduced.
- Construction of campgrounds, interpretive facilities, and other developed recreation facilities would enhance recreational opportunities and could benefit the regional economy.

Vegetation – Fuels Management Activities

- BLM budget allocations for fuels treatment are the key variable in the fuels treatment model. Future budgets of Federal agencies are difficult to predict and direct expenditures for fuels treatment could vary greatly.

Vegetation – Restoration Activities

- Personnel and equipment would be hired or contracted regionally but materials would be purchased competitively to conduct restoration efforts and most likely would not come from the region.

Indirect Impacts

Idaho Army National Guard Activities

- Increasing travel distances, planning requirements, infrastructure development, and other training related expenditures would have an adverse short-term impact on the IDARNG. These short-term impacts would reduce the amount of time available for training and reallocate resources (funds, man-power, equipment, etc.) that would otherwise be used for training activities.
- Reducing the types or area available for training would have a long-term, adverse impact on the IDARNG ability to train by reducing Federal or state funding.
- Site-specific training restrictions and resource expenses that are not directly related to training, such as noxious weeds and rehabilitation programs, could have a beneficial long-term impact on the IDARNG ability to train. By imposing voluntary and involuntary restrictions in key training areas (shrub habitat, special status plant species, cultural sites, etc.) and allocating resources to mitigate training related impacts, the IDARNG limits the overall adverse affects to resources within the OTA to levels commensurate with the NCA Legislation (Argonne National Laboratory 2004).

Livestock Grazing Management Activities

- Reductions in actual use AUMs could have a significant impact on the viability of livestock operations that are dependent upon NCA grazing.
- Increasing private forage inputs to compensate for lost AUMs increases marginal

costs and reduces net ranch income. Some ranching households may have other sources of income to supplement ranch income, which could help compensate for lost income from reductions in AUMs. If net ranch income is driven below the minimum level sufficient to maintain operations, these ranches would likely fail or be converted to "hobby ranch" operations.
- Increasing costs could result in reducing the size of ranch operations and associated labor inputs.
- Ranches in a stronger financial position could purchase weaker operations and consolidate units into more efficient ranch operations. Private lands might be concentrated into other operations or be shifted out of grazing into hobby ranching, development, or other land uses. The net effect would be a reduction in the number of ranches and ranching income and a subsequent increase in other income such as development and construction.

Recreation Management Activities

- Habitat restoration would improve recreational experiences by providing more natural settings for dispersed recreation.
- Visitation generates employment and earnings in retail businesses, hotels and motels, eating and drinking places, and other tourist services. Direct spending then generates rounds of re-spending (i.e., multiplier effects). Economically, Boise dominates the overall region and could be expected to experience a large share of these multiplier effects. Most of this income is associated with the retail trade and service sectors, where direct spending for food, gasoline, lodging, and other visitor direct spending is felt.

Vegetation – Fuels Management Activities

- Grazing for fuel treatments would be separate from permitted use and would be done through contracting.

Vegetation – Restoration Activities

- Closure of treated areas during the establishment period could adversely affect recreational users and livestock permittees over the short-term.
- Restored areas could improve the quality of recreation experiences and would stabilize annual forage production over the long-term.

Discussion of Impacts by Alternatives

Economics: Alternative A

Idaho Army National Guard Activities: The area available for training, amount of training conducted, and number of support personnel would remain stable. Therefore, there would be no change in payroll, construction, operations, and maintenance expenditures resulting in no change in the social and economic conditions. The IDARNG would continue to have a moderate long-term beneficial impact on the local economy. Total employment linked to OTA operations is estimated at 85 direct jobs, another 560 military and contractor jobs linked indirectly to OTA operations, and 297 jobs linked through the multiplier effect of military spending. The overall impact of OTA operations would be about $26 million in earnings.

Livestock Grazing Management Activities: There would be slight, short- and long-term benefits to social and economic conditions. The 28,000 AUMs of annual livestock use accounts for 17 jobs in the Region or about 2% of all range cattle employment in Southwest Idaho. This constitutes about 0.01% of total employment and 0.003% of all income.

Recreation Management Activities: There would be slight, short- and long-term benefits to social and economic conditions. Annual spending attributable to recreation use would amount to approximately $7.3 million regionally. Estimates of the total impact of NCA visitor spending including direct, indirect, and induced spending indicate that visitors to the NCA would account for about 135 jobs in Southwest Idaho. Most of this revenue would be associated with the retail trade and service

sectors, where direct spending for food, gasoline, lodging, and other visitor direct spending is felt. The total impact of NCA recreation on the four-county regional economy would amount to roughly 0.04% of all jobs, and 0.03% of all income. That relatively more jobs are created than earnings is simply a reflection of the generally lower than average earnings in recreation related sectors.

Vegetation – Fuels Management Activities: There would be negligible, short- and long-term benefits to social and economic conditions. Direct expenditures (average annual expenditures) of $50,000 would generate about two jobs in the region.

Vegetation – Restoration Activities: There would be negligible short- and long-term benefits to social and economic conditions. An estimated two to three jobs in the region would be supported by restoration work. NCA restoration generated about two jobs in the region.

Conclusion – Economics – Alternative A

There would be no changes in employment (1,100 jobs) and no changes in associated income. The objectives and DFC would be met.

Economics: Alternative B

Idaho Army National Guard Activities: There would be a slight long-term adverse impact to social and economic conditions. Military operations in the OTA would be reduced by one percent resulting in a loss of about 7 employees associated with training. Total employment impacts with the multiplier effect would result in the loss of about 14 jobs with earnings of about $400,000. The majority of the jobs lost would be in the government sector.

Livestock Grazing Management Activities: Livestock grazing operations show about a 15% short-term decrease from current management primarily related to vegetation treatments. There would be a loss of 3 jobs and an $80,000 decrease in livestock related earnings.

Recreation Management Activities: About 4 jobs with an associated income of $90,000 would be created by recreation spending. This change would not be perceptible in the Region's economy (less than .01% change).

Vegetation – Fuels Management Activities: Twelve jobs would be created with an associated payroll of about $300,000. Most of the jobs would be government and contract employees. Employment (0.004% increase) and economic (0.003% increase) benefits would be slight over the long-term.

Vegetation – Restoration Activities: Eleven jobs would be created with an associated payroll of about $300,000. Most of the jobs would be in contract employees performing restoration work. There would be a slight increase in the Regional economy. Employment changes would produce a 0.004% increase in jobs, while income in the Region would show a similar very small percentage increase.

Conclusion – Economics – Alternative B

There would be a slight beneficial impact on the regional economy. Combined impacts of recreation, military, livestock operations, and vegetation treatments would result in a total increase of approximately 16 jobs or a 1% change from current conditions in NCA related jobs. The impact would be negligible (0.005%) in the region. Change in earnings would also be negligible, showing an increase of about $400,000 in regional earnings. This is a 1% change in NCA generated earnings and a 0.004% change in earnings in Southwest Idaho. The objectives and DFC would be met.

Economics: Alternative C

Idaho Army National Guard Activities: There would be slight to moderate long-term adverse impacts to social and economic conditions from the reduction of off-road maneuver capability on over 16% of the OTA. The resulting scheduling conflicts and increased travel time would result in a 3% reduction in military training operations. With the multiplier effect, a total of 39 jobs linked to OTA operations

and about $1 million in associated income would be lost.

Livestock Grazing Management Activities: With 5,000 AUMs being maintained in the OTA Impact Area and no livestock grazing in the remainder of the NCA, there would be an approximate 83% reduction in actual use. This would lead to the loss of an estimated 14 jobs (0.005%) with a total payroll of about $250,000 (0.003%). Although the effects on livestock grazing would be very noticeable, the adverse regional economic impacts would be slight. Ranch earnings are probably a better measure of the role of NCA livestock grazing. Ranch earnings of about $150,000 would be lost as a result of the 83% reduction. If ranchers attempted to substitute other grazing for NCA grazing, it would cost over $300,000 per year to purchase other AUMs at current market rates.

Recreation Management Activities: There would be a 25% increase in recreation activity and associated spending with an increase of approximately 32 jobs. This would be a slight benefit in the regional economy. Increased employment linked to recreation spending would probably be primarily in the Region and would affect the retail trade area sector, particularly sales of gasoline, recreational vehicles and food services, and the hospitality sectors.

Vegetation – Fuels Management Activities: There would be approximately 13 additional jobs in the Region with associated earnings of about $300,000 resulting in a 0.004% increase in employment and 0.03% increase in earnings.

Vegetation – Restoration Activities: There would be approximately 29 additional jobs in the Region with associated earnings of about $800,000 resulting in a 0.01% increase in employment and 0.08% increase in earnings.

Conclusion – Economics – Alternative C

At the Regional level, there would be a slight to moderate adverse economic impact on military activities and livestock operations. There would be a slight beneficial impact from recreation-related spending. Spending associated with vegetation treatments would be substantial, but would only have slight benefits at the Regional level. There would be a negligible increase in jobs. All sectors would see some increase in jobs with the exception of IDARNG and livestock management. The objectives and DFC would be met.

Economics: Alternative D

Idaho Army National Guard Activities: There would be a decrease of 9 jobs (0.003%) in employment linked to military operations in the OTA. Regional long-term economic impacts would be negligible.

Recreation Management Activities: The economic impacts would be the same as described in Alternative C.

Livestock Grazing Management Activities: Livestock operations would show a temporary decrease (up to 30%) in actual use (8,500 AUMs) resulting in a loss of 5 jobs and about $100,000 in income. This would result in a slight to moderate adverse impacts to NCA permittees in the short-term and negligible adverse impacts to the Regional economy.

Vegetation – Fuels Management Activities: Impacts would be the same as identified in Alternative C.

Vegetation – Restoration Activities: Impacts would be the same as identified in Alternative C.

Conclusion – Economics – Alternative D

There would be a slight adverse economic impact on military activities and livestock operations. There would be a slight beneficial impact from recreation-related spending. Spending associated with vegetation treatments would be substantial, but would only have slight benefits at the Regional level. There would be a negligible increase in jobs. All sectors would see some increase in jobs with the exception of IDARNG and livestock management. The objectives and DFC would be met.

4.2.22.2 Environmental Justice

Actions proposed under the alternatives would not cause disproportionate adverse human health or environmental impacts to minority and/or low-income populations. Restoration programs associated with all the alternatives would occur within the NCA and would not affect populations in nearby communities. NCA operations and permitted uses, including tribal treaty rights, would continue similar to current conditions, including recreation, grazing, and hunting in permitted areas. All areas, except the OTA Impact Area would remain available and open to all ethnic groups and income levels, and no action would displace users to low-income or ethnically sensitive areas. For these reasons, environmental justice was dismissed as an impact topic in this document. Any adjustments in the boundary of the NCA and/or a reduction in public lands available for tribal use would not result in a reduction in natural resource values available for tribal use. Also see Economic Conditions section 4.2.22.

4.3 CUMULATIVE IMPACTS

Cumulative impacts result when the effects of an action are added to or interact with the combined effects of all other ongoing actions in a particular place and within a particular time. While impacts can be differentiated as direct and indirect, and short- and long-term, cumulative impacts consider the compounding effects of all actions over time. Thus, the cumulative impacts of an action can be viewed as the total combined effects of all activities on a particular resource, ecosystem, or human community, no matter what entity (Federal, non-Federal, or private) is taking the actions.

4.3.1 Description of this Section

The cumulative impacts section is organized to first provide a general description of regional influences. These are factors outside of the NCA that when considered with the management actions identified in each alternative would create either beneficial or adverse cumulative impacts that should be analyzed. This discussion is followed by the analysis of cumulative impacts for each resource and resource use that had adverse impacts identified in the resource discussions under environmental consequences (4. 0.)

In an effort to diminish redundancy and repetition, the regional influences discussion is designed to provide detailed information regarding issues that will affect a majority of the resources within the NCA. Regional influences include population growth and expansion, increased recreational activity, invasive and noxious plant species, fire and fuels management, SSPs, livestock grazing, and lands and realty actions.

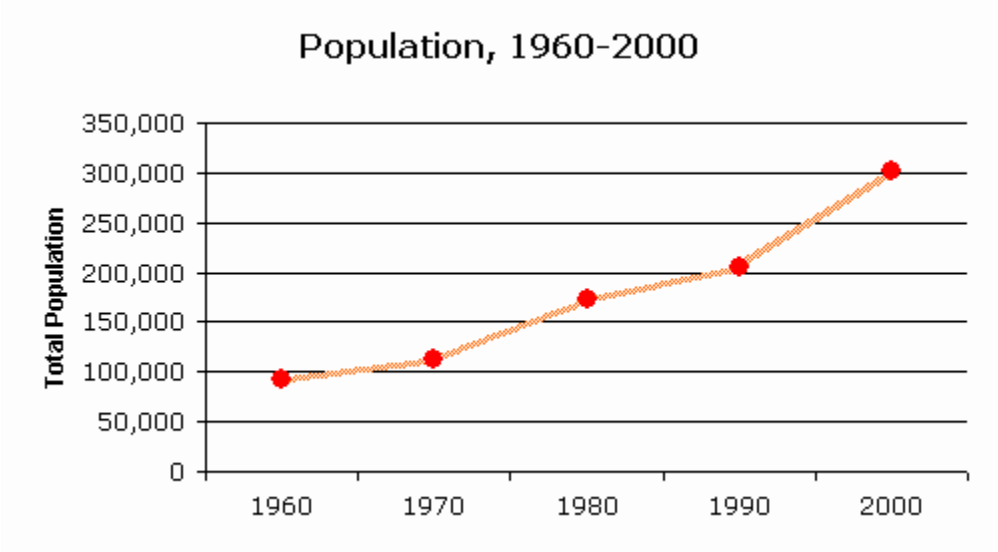
Following the general discussion of regional influences is the analysis of cumulative impacts, divided by resource, discussing the cumulative impacts surrounding each resource in the NCA. Each discussion begins with a description of the region of influence for that resource followed by a discussion of past and current trends, as well as future anticipated trends. Past and current trends describe the current regional status of the resource being discussed, as well as noteworthy events from the past that contributed to the current situation. Future anticipated trends discuss the potential outcomes of current trends in the foreseeable future. Following the past, current and future trends section is a description of cumulative impacts for each of the alternatives. This part of the analysis addresses the region wide affect that management proposed for the NCA could have on the resource being discussed.

4.3.2 Regional Influences

Population Growth

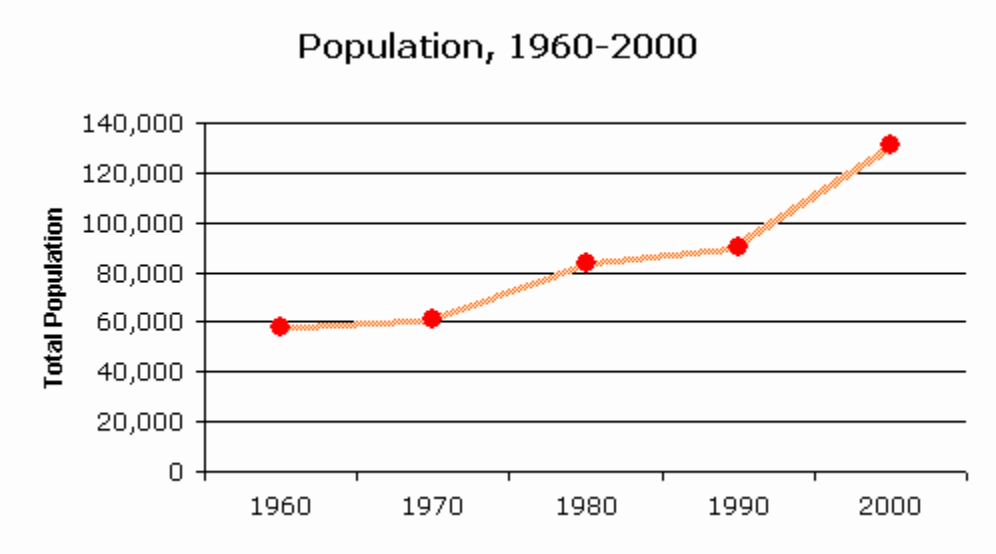
The latest census ranked Idaho fourth nationally for population growth, which has occurred primarily around the urban centers in Ada and Canyon counties. The quality of life, active job market, computer science industry, abundant recreational opportunities, and close proximity to the State capital makes the region attractive for migration. According to the 2000 census, Ada and Canyon counties each experienced approximately 46% percent growth since 1990. These two counties are adjacent to the NCA and provide the greatest influence for population-related cumulative impacts. Public lands adjacent to an area that has sustained a population increase of this magnitude will logically experience higher levels of recreation, resource use, and user conflicts. Projections for the future vary greatly by demographic area. Kuna is projected to grow 13% by the year 2025, a significant amount, but less than surrounding areas. The southern demographic areas of Ada County are predicted to have huge growth, especially in the rural areas. Southeast and southwest Ada County is projected to grow between 15-21% by 2025. Southeast rural Ada County is projected to grow by 225%; southwest is projected to grow 693% by the year 2025. These extreme growth areas in Ada County are the closest population areas to the NCA

Figure 4.1. Ada County Population Growth.



Source: US Bureau of the Census 2001

Figure 4.2. Canyon County Population Growth.



Source: US Bureau of the Census 2001

Recreation

The natural beauty and outstanding recreation opportunities draws thousands of visitors to Idaho annually. As the United States (U.S.) and Idaho populations grow, so too does demand for outdoor recreation opportunities. In addition, changing industries and life-styles in Idaho and the surrounding region are contributing to a shift in natural resource use and management away from traditional product-oriented industries to more amenity-based industries. Tourism is the fastest growing economic activity in Idaho, and will likely intensify over the next 5 to 10 years based on current population estimates (IDPR 2003). While outdoor recreational activities and tourism can help many rural communities diversify or supplement a reduction in historic consumptive, industrial–based activities, proactive management will be needed to minimize the social and environmental costs associated with increased non-consumptive uses. Maximizing benefits while minimizing or mitigating the costs to natural resources is vital to the sustainability and health of these communities.

The 2003-2007 Idaho Statewide Comprehensive Outdoor Recreation and Tourism Plan (SCORTP), developed under the direction of the Idaho SCORTP Task Force (IDPR 2003), ranked the relative importance of 19 issues associated with outdoor recreation. Idahoans ranked the following as their top 10 issues:

1. Protecting water quality
2. Protecting existing access to public lands
3. Protecting natural resources on public lands
4. Educating youth about natural resources and the environment
5. Controlling invasive species
6. Educating adults about natural resources and the environment
7. Providing recreation safety instruction to youth
8. Providing outdoor recreation education for youth
9. Providing access for the disabled
10. Rehabilitating outdoor recreation facilities

In addition to these issues, several key outdoor activities have increased appreciably in Idaho and are likely to continue to increase in the future (Cordell *et al.* 2004; IDPR 2003). These activities were also found to be more prevalent in Idaho and other rural states than the rest of the nation as a whole. They include, but are not limited to motorized vehicle use, hunting, and water-based recreation. A number of other activities, including non-pool swimming, ca-

noeing, and visiting a beach or waterslide are generally associated with water-based activities and were therefore included (Cordell *et al.* 2004). According to a national study by Cordell *et al.* (2004), the Rocky Mountain Region will see a significant demand increase for water-based activities over the next several years.

The demand for off-highway vehicle (OHV) driving has grown significantly. In 1960, when the first of the U.S. National Survey was done for the Outdoor Recreation Resources Review Commission, off-road motorized recreation was not even on the "radar" as a recreational activity. However, from 1982 to 2001, ORV use became one of the fastest growing activities in the country, growing in number of participants greater than 12 years old by over 100 percent (Cordell *et al.* 2004). Based on their survey (from Fall 1999 to summer 2000), an estimated 37.6 million people 16 years of age or older (17.6% of people that age or older) had ridden or driven motor vehicles off-road at least once in the past 12 months. That number increased to an estimated 49.6 million by fall 2003 – Spring 2004 (rising to 23.2% of the population).

Similarly, according to the 2003 IDPR report, Idahoans participate in more wildlife-based activities than the rest of the nation, with hunting being the number one activity. Idahoans hunt big game four times as often as the national average, and hunt waterfowl nearly six times as often. Non-consumptive wildlife activities, such as viewing animals, were also higher than the national average (IDPR 2003).

Based on current population trends, the demand for these and other outdoor recreational activities in Idaho and the surrounding region is likely to increase in the future. As a result, the region will need resources for biking, picnicking, walking, camping and family gatherings in coming years to meet population projections (IDPR 2003). Based on these estimates, a greater emphasis is likely to be placed on facilities development and management of recreational activities in order to reduce the overall potential impacts to natural resources.

Within the region of influence, vehicle travel is currently managed according to motorized vehicle use area designations, and route designations will soon be completed for the Bruneau, Owyhee, and NCA Field Offices. Route designations would limit motorized vehicle use, resulting in long-term beneficial environmental impacts due to a reduction of disturbance to soils, biological crusts, and the protective vegetative cover. However, limiting cross-country travel could result in some individuals who wish to travel crosscountry being displaced to other areas, some of which are not currently being used for that purpose. This displacement would have localized adverse impacts to natural resources in areas that are currently not being impacted.

SRMA development would generally have beneficial economic impacts within the region. These areas would help meet the expected increase in demand for recreational opportunities within the region of influence. Cumulatively, these increased recreational opportunities could decrease visitation to recreational areas located further away from the zone of influence, resulting in a localized increase of spending for fuel, food, and other travel related expenses.

A recreational designation of the Snake River under the W&SR Act would result in beneficial impacts to the region of influence. Protections offered under this Act would preserve the outstandingly remarkable recreational values of the river. Wildlife watching activities and associated spending within the region could increase as a result of the designation. Overall impacts would be less than slight.

Vegetation – Restoration

Restoration efforts on non-Federal lands outside the NCA have been historically limited to urban interface sites, rangelands used for livestock, or areas associated with special status or charismatic species (i.e., elk and deer winter habitat, slickspot peppergrass, etc.). Projects designed to restore specific components of plant communities rather than the system as a whole can alter the overall dynamics of the

system and adversely affect upland vegetation. However, it can be assumed that most restoration measures would benefit degraded sites to some extent compared to no action.

Several new programs intended to restore wildlife habitat on agricultural or other altered vegetative communities on private lands could have a beneficial impacts on upland vegetation. Included in these are the Farm Security and Rural Investment Act of 2002, which has created conservation funding that focuses on environmental issues. The conservation provisions help private farmers and ranchers meet environmental challenges on their land through direct funding and education. Other similar programs could potentially protect or enhance private lands throughout the region, which would likely have a beneficial affect on upland vegetation.

Invasive and Noxious Weeds

Noxious weed treatments in the NCA could result in cumulative benefits within the larger region of influence. Where new populations of noxious weeds were eradicated within the NCA, they would be eliminated as a possible seed source for other areas in the region, which would reduce crop losses, decrease wildlife habitat degradation, and improve recreational site quality. Overall impacts would be less than slight.

Invasive and noxious weeds are harmful, nonnative plant species that damage our economy and environment by displacing ecologically or economically valuable native rangeland species or agricultural crops or threaten the integrity of streams and lakes. As international commerce and travel increases, so does the threat that unwanted species will arrive in Idaho or infest areas where they are not now established.

Over the years, Idaho, like all other states, has enacted statutes and created programs designed to prevent and manage a wide variety of invasive species. Often, these programs are administered in cooperation with various partners and range from monitoring site-specific populations to landscape-wide trends. The agencies involved in this important work include: Ada, Canyon, Elmore, Gem, Owyhee, and Payette County Weed Departments; Idaho Department of Lands; Idaho Department of Fish and Game; Idaho Department of Transportation; Idaho Power Company; private landowners; USDA Animal, Plant Health Inspection Service (APHIS); and the Lower Gem and South Fork of the Boise Cooperative Weed Management Areas (CWMAs).

In addition, the University of Idaho colleges of Agriculture and Natural Resources and the Cooperative Extension Service play important research and educational roles. Finally, local governments, industries and their associations, various interest groups and individuals work cooperatively in control and educational efforts, often coming together in successful efforts such as cooperative weed management areas and the Idaho Weed Awareness Campaign.

The Idaho Strategic Plan for Managing Noxious Weeds was also released in February of 1999, which created Statewide Cooperative Weed Management Areas (CWMA) that developed and integrated weed management plans. These weed management programs are responsible for identifying local and regional invasive and noxious weed concerns and educating local landowners on treatments, government aids, etc. Currently there are 32 successfully functioning CWMAs that cover approximately 82% of the State, including the area surrounding the NCA. This cooperative process has since lead to the establishment of the Idaho Invasive Species Council (IISC), which was established by Governor Kempthorn's Executive Order No. 2001-11. Their primary task is to "provide policy level direction and planning for combating harmful invasive species infestations throughout the State and for preventing the introduction of others that may be potentially harmful". In addition to these and other invasive and noxious weed management programs implemented by the State, and on a county-by-county basis, vari-

ous Federal statutes have been put in place to combat invasive and noxious weeds as well.

Special Status Plants

In addition to regulatory and other protective measures associated with public and State lands, areas containing known SSP populations generally have greater protection, which has beneficial long-term affect to those species. Private lands have no regulations to protect SSPs; therefore, impacts to individual populations from surface disturbing activities on private lands could reduce the overall connectivity of the regional population and lead to future extinction or genetic separation. However, State and public agencies have been working with private individuals and corporations to reduce impacts through voluntary conservation measures. These agreements could increase protection of SSS regardless of ownership, which would have beneficial regional effects.

Fire Suppression and Fuels Management

Wildfires can remove vegetative cover and reduce soil stability, which can increase erosion and sedimentation near riparian areas. The BLM maintains cooperative agreements with fire fighting organizations on lands within the region, including: IDL, U.SFS, Boise Fire Department, Meridian Fire Department, North Ada County Fire Department, IDARNG, Mountain Home Air Force Base and several rural firefighting departments or districts (USDI 2004b, pp 368-370).

Regardless of jurisdiction, protection of life and property is the primary focus of suppression efforts. On public lands, efforts throughout the region recognize that prevention and aggressive suppression are the most effective methods to reduce the loss of shrub steppe habitat. Areas with high resource values in the urban interface (i.e. Boise Front, Kuna, etc.) have the highest suppression priority (suppressing fires to <200 acres 90% of the time). Suppression goals in fire management units that have a relatively high proportion of remnant shrub communities (Grandview, Owyhee Front, Upper Danskin) are similar to those of the NCA (suppressing fires to <300 acres 90% of the time). In the remaining units, where degraded communities dominate, suppression goals are lower (suppressing fires to <500-4,000 acres 90% of the time). Fire suppression in slickspot peppergrass management areas are even lower, at <100 acres 90% of the time.

Beyond the urban interface, fuel breaks are the primary method used to control or reduce the size of wildfires. The majority of these are associated with transportation corridors, such as highways and railroad tracks, or to protect slickspot peppergrass and other SSS habitat. Fence-line burning is also used to reduce hazardous fuels, primarily Russian thistle, adjacent to roads and railroad tracks.

Livestock Grazing

By 2009, public land grazing within and outside the NCA will be managed under Idaho S&Gs for Livestock Grazing Management to enhance healthy, functioning and productive rangelands.

Where livestock operators on private lands in the region continue not to implement BMPs, riparian area vegetation and downstream water quality will continue to be adversely affected. For example, where livestock are allowed unrestricted access to streambanks, or where upland grazing increases off-site erosion and sedimentation, pollutants will be increased locally and travel downstream. Unmanaged grazing in riparian areas may also reduce streambank stability, resulting in blowouts during high run-off events and increased sediment loads that reduce water quality further downstream. Infestations of invasive plants on private lands, including noxious weeds, may become a seed source for lands elsewhere. Riparian vegetation would be adversely affected by invasion of noxious and other weed species. Riparian areas could improve where land managers install range improvements, such as fences, cattle guards, pipelines, and water developments to enable livestock use while protecting water quality and riparian vegetation.

Lands and Realty

As lands within the region are subdivided and re-zoned, access road, utility, and infrastructure development will increase. Private land development would generally be benefited by land exchanges that result in larger contiguous parcels of privately held land outside the NCA. However, because the potential for private land exchanges in the NCA is limited, region-wide impacts would be negligible.

4.4 CUMULATIVE IMPACTS BY RESOURCE AND RESOURCE USE

4.4.1 Air Quality: Cumulative Impacts

All alternatives would meet the air quality objective. Where prescribed burn activity coincides with nearby wildfire activity or agricultural burning there would be a short-term adverse cumulative impact to air quality by combined emission rates. Under all alternatives, impacts would be transitory in nature and no long-term cumulative impacts are expected.

4.4.2 Cultural and Tribal Resources: Cumulative Impacts

Region of Influence

- The area considered in this cumulative impact analysis is Ada, Canyon, Elmore, and northern Owyhee counties.

Past and Current Trends

- Most of the region has not been inventoried for cultural resources. There is potential for cultural resource occurrence in unsurveyed areas, but until surveys are completed, the presence and/or significance of resources and impacts cannot be quantified.

Future Anticipated Trends

- Human activities associated with population growth would potentially increase all types of recreational and development-related activities, which could disturb cultural resources.

Cumulative Effects

Cultural Resources: Alternative A

Surface disturbing activities associated with regional population growth and the resulting development would adversely affect cultural resources outside the NCA. In addition to surface disturbing activities, by the very nature of having more people in the area, there would be an increase in the likelihood of cultural resources being disturbed. The loss of native vegetation, and changing viewshed could have adverse impacts on traditional cultural properties.

Cultural resource interpretation and education within the NCA is not emphasized under this alternative, which may have adverse impacts to the region's cultural resources if the public is unaware of their value and sensitivity. Increased demand for surface disturbing activities, such as road and utility rights-of-way, require cultural resource inventories prior to BLM authorizing the activity. These inventories should reduce the resulting adverse impacts to cultural resources in the NCA and would not be a factor in adverse cumulative impacts region-wide. However, with the increasing population and associated demands for use of the NCA, as well as only two developed recreation facilities, there would be increased potential for adverse impacts to cultural resources.

There would not be any appreciable adverse cumulative impacts to cultural resources under this alternative.

Cultural Resources: Alternative B

This alternative would emphasize public education and site-specific interpretation for cultural resources more strongly than under Alternative A. This could benefit cultural resources region-wide as the public would be more aware of the sensitivity of cultural resources within and outside the NCA. It is possible; however, that site-specific interpretation could result in increased damage or vandalism to associated cultural sites.

Large-scale utility developments related to the designation of a utility corridor under this alternative could adversely affect cultural resources in the NCA. However, by focusing major region-wide utility developments to a confined corridor, associated soil disturbance and overall region-wide cumulative impacts could be reduced.

There would be a slight positive impact to cultural resources as a result of education and interpretation programs informing people about the importance and sensitivity of cultural resources.

Cultural Resources: Alternative C

NCA management would continue to educate the public about the value and sensitivity of cultural resources, but interpretive projects would not be implemented at a site-specific level. This would benefit cultural resources region-wide by raising public awareness about the importance and sensitivity of cultural resources, but would not entail the potential site-specific impacts to cultural sites that might be associated with interpretive projects.

Under this alternative, an additional utility corridor would be designated south of the Snake River and roughly parallel and adjacent to Highway 78. Since most of this corridor would be outside the NCA, large-scale utility developments would have few if any impacts to cultural resources in the NCA. However, by focusing major region-wide utility developments to a confined corridor, associated soil disturbance and overall region-wide cumulative impacts could be reduced. The proposed avoidance area would be largest under this alternative, which would reduce region-wide cumulative impacts.

Livestock grazing would be eliminated within the NCA, which would have few if any impacts on cultural resources. It is possible, however, that slight adverse cumulative impacts to cultural resources could occur as displaced livestock were more heavily concentrated on adjacent private lands.

Cultural Resources: Alternative D

Impacts to cultural resources would be the same as those described under Alternative A except that the large scale restoration efforts would have slight positive cumulative impacts by helping protect and enhance traditional cultural properties.

4.4.3 Fish and Wildlife: Cumulative Impacts

Region of Influence

- This discussion about cumulative impacts for fish and wildlife species is directly related to vegetation management in the NCA and the surrounding region. The region of influence for this section will be the same as the vegetation section: Wyoming big sagebrush and salt desert shrub communities in the 7-10" precipitation zone in the Snake River plain, generally less than 4,000 feet in elevation, between Glenns Ferry and the Oregon border.

Past and Current Trends

- Currently, and during the recent past, several factors have led to a general overall decline in species abundance within the NCA and surrounding regions as a result of habitat loss, a loss of range-wide densities, a change in the degree of connections among habitats, or a combination of all three (range loss, density declines, inaccessible habitat). Management actions on public and private land have carried wildlife associated implications. Amphibians, reptiles, birds, and mammals have been impacted from the reduction of wetlands, loss or conversion of habitat, introductions of exotic species, decreased water quality, motorized vehicle use, increased roads, herbicides, and recreational use including hunting.
- Within the Owyhee Resource Area, 87% of inventoried stream miles were found to be in unsatisfactory condition. The Four Rivers Field Office has set an objective of improving the condition of 30 miles of habitat and maintaining the remainder. Current and historic information about the

abundance and condition of wildlife is rare for most species due to large expanse of Federal public land in southwest Idaho combined with limited agency resources to monitor and survey the resource areas. Generally, the current status of most wildlife habitats can be used as a reflection of the status of the associated species.

- Shrub steppe communities once covered vast areas of the intermountain west, but a variety of human activities (i.e. conversion to agricultural or urban uses, introduction of exotic annual grasses and a subsequent change in the fire regime, replacing sagebrush with exotic perennial grasses) have combined to reduce shrub steppe communities by at least 50% since European settlement (Knick 1999, TNC). Fire and human disturbances continue to be the primary threats to shrub steppe ecosystems (USDA and USDI 1997, Chapter 2, p 83,). Remnant shrub communities are highly fragmented north of the Snake and east of the Bruneau rivers. Remnant shrub communities south of the Snake and west of the Bruneau rivers are less fragmented.
- Surrounding agricultural lands not utilizing BMPs could potentially further decrease water quality in the Snake River through increased sedimentation, nutrient loading, and fecal bacteria. In some cases, effective management practices have minimized degradation to water quality in the Snake River and surrounding water bodies. Changes in water quality could have an effect on fish and wildlife species that utilize aquatic and riparian systems.

Future Anticipated Trends

- Fish and Wildlife trends for the future will be dependant on the maintenance of sagebrush steppe habitat. Maintaining, enhancing and expanding sagebrush steppe will be dependant on a general increase in awareness and education regarding local ecosystems, proactive fuels and weed management programs, and an increased emphasis on rehabilitation and restoration of degraded or disturbed sites to a suitable/desirable status. Success in these efforts could slow or reverse current trends in shrub steppe loss, resulting in beneficial impacts for fish and wildlife. However, current population trends indicate that the demand and impact on natural resources is likely to increase appreciably; therefore, conservation measures would need to increase at a rate equal to or greater than-consumption in order to maintain or improve the condition of fish and wildlife habitat. The future trends of fish and wildlife in the region will be determined by the success of habitat conservation.

Cumulative Effects

Fish and Wildlife: Alternative A

Overall, the regional impacts from fire, fuels treatment, private land development, weed expansion, off road recreation, etc., combined with the affects of the management actions identified in Alternative A would result in long term cumulative adverse impacts to wildlife populations and habitat. The limited fuels treatment program along with increased agricultural and urban expansion could continue the loss of small mammal habitat in the region, further contributing to the need of raptors to expand their foraging range. The effects on wildlife would be a substantial loss of habitat function or disruption of life cycles.

Fish and Wildlife: Alternative B

Overall, the regional impacts would be the same as described in Alternative A; however, as a result of increased restoration and rehabilitation, along with other management actions identified in Alternative B, the cumulative adverse effects on wildlife would be readily detectable and localized, at the population level within the NCA.

Fish and Wildlife: Alternative C

Overall, the regional impacts would be the same as described in Alternative A. However as a result of increased restoration and rehabilitation, no livestock grazing within the NCA and the reduced loss of remnant shrub communities, along with other management actions there would be negligible adverse ef-

fects and a substantial benefit to wildlife would accrue through improved habitat quality and stabilized prey populations within the NCA.

Fish and Wildlife: Alternative D

The overall regional impacts would be the same as described in Alternative A. The beneficial effects would be the same as discussed in Alternative C, but would take longer to occur.

4.4.4 Special Status Animals: Cumulative Impacts

Cumulative Impacts are being analyzed at a species-specific detail for Threatened and Endangered animals only. Cumulative impacts for the remainder of special status animal species are merged into Fish and Wildlife Section 4.4.3.

Region of Influence

Idaho Springsnail

- The target recovery area for the Idaho springsnail includes the main stem of the Snake River between River Mile (RM) 518 to RM 553. However it has also been found as far downstream as RM 338. Cumulative affects will be analyzed in terms of influences to the water quality of the Snake River between RM 553 and RM 338.

Bald Eagle

- The scope of this cumulative impacts discussion will be the Boise District Boundary of the BLM, including public, State, private, and other lands within the Owyhee, Bruneau, Jarbidge and Four Rivers Field Offices, mirroring the vegetation and fish and wildlife sections. This boundary was chosen to compare the NCA bald eagle restoration efforts to other regional management.

Yellow-Billed Cuckoo

- The scope of this cumulative impacts discussion will be the Boise District Boundary of the BLM, including public, State, private, and other lands within the Owyhee, Bruneau, and Four Rivers Field Offices. This boundary was chosen to compare the NCA yellow-billed cuckoo efforts to other regional management.

Past and Current Trends

Idaho Springsnail

- The Idaho springsnail, also known as the Homedale Creek springsnail, was listed as endangered on December 12, 1992 (57 FR 59244). Although critical habitat for this species has not been designated, a recovery plan that included this snail was prepared in 1995 (USFWS 1995) and is still being used as a recovery guidance document. Refer to Chapter 2 (Section 2.2.6.1) for detailed information about the past and current trends of the Idaho springsnail.

Bald Eagle

- Habitat loss as a result of liquidation of late-success ional forests and trees, recreational developments, and other human activities; shooting; abnormally low reproduction caused by contaminants, including DDT, PCBs, and dioxin; lead poisoning; exposure to poisons used in pest control activities; power line electrocutions; and collisions have all affected the bald eagle over the last 100 years. Recently, the bald eagle population has increased throughout most of the United States (U.S.) south of Canada. Losses from contaminants have been reduced in recent years. The number of breeding and wintering eagles has increased in Idaho since the 1960s. Refer to chapter 2 (2.1.6.1) for detailed information about the past and current trends of bald eagles.

Yellow-Billed Cuckoo

- The range and population of the cuckoo have been substantially reduced across the western U.S. in the last 50 years. Historically, yellow-billed cuckoo have been found scattered in drainages in arid and semi-arid portions of Idaho. Most sightings have been made along the Snake

River in southern Idaho. Breeding has been confirmed on the South Fork of the Snake River in lati-long 22 and in lati-long 26 in Minidoka County and breeding has been suspected in 6 other lati-longs (Stephens and Sturts 1998. p.36). Refer to Chapter 2 (Section 2.2.6.1) for detailed information about the past and current trends of yellow-billed cuckoos.

Future Anticipated Trends

Idaho Springsnail

- To date, no population viability studies have been conducted for the Idaho springsnail. The presence of the non-native New Zealand mudsnail in the Snake River is a threat to Idaho springsnails over the short- and long-term. The New Zealand mudsnail directly competes with the Idaho springsnail and has a reproductive advantage. With the mudsnail's ability to dominate a waterbody with its sheer numbers and the capability of consuming over 80% of a river's productivity, the future for Idaho springsnails could continue to exhibit a downward trend.

Bald Eagle

- Increased awareness and appreciation of bald eagles, combined with crucial habitat conservation nationwide has led to an increase in eagle numbers. Current wintering bald eagle trends in southwest Idaho are stable and should exhibit continued growth in the future.

Yellow-Billed Cuckoo

- The yellow-billed cuckoo is considered a rare, sometimes erratic visitor and breeder in the Snake River Valley of southwestern Idaho. The potential for continued habitat loss is possible scenario for the Snake River Valley, resulting from rising population pressures and subsequent development. Any beneficial or adverse cumulative impacts within the scope of this analysis are likely to have a negligible effect on the future trends of yellow-billed cuckoos.

Cumulative Effects

Special Status Animals: Alternative A

Overall, the regional impacts from fire, fuels treatment, private land development, weed expansion, off road recreation, etc., combined with the affects of the management actions identified in Alternative A would result in long-term cumulative adverse impacts to special status animal populations and habitat. The effects on special status animal species would be a substantial loss of habitat function or disruption of life cycles.

Special Status Animals: Alternative B

Overall, the regional impacts would be the same as described in Alternative A. Although significant resource improvements are proposed under this alternative, they would not be great enough from a landscape perspective to moderate the more adverse impacts occurring region-wide.

Special Status Animals: Alternative C

Overall, the regional impacts would be the same as described in Alternative A. Although significant resource improvements are proposed under this alternative, they would not be great enough from a landscape perspective to moderate the more adverse impacts occurring region-wide. The significant restoration actions and other resource protections proposed would help mitigate some of the region-wide impacts.

Special Status Animals: Alternative D

The overall regional impacts would be the same as described in Alternative A. The beneficial effects would be the same as discussed in Alternative C, but would take longer to occur.

4.4.5 Special Status Plants: Cumulative Impacts

Region of Influence

- Boise District (Owyhee, Bruneau, and Four Rivers Field Offices)

Past and Current Trends

- Increased population growth, conversion of native plant communities for urban and agricultural purposes, impacts from wildfire and livestock grazing, and the introduction of invasive and noxious weed species has caused a decline in the native flora within the region (USDA and USDI 1997). These declines have resulted in a growing number of Endangered, Threatened, and SSS. Currently there are 48 SSS identified within the region (CDC 2003). To protect these species, county, State, and Federal regulations have been enacted, most prominently is the 1973 Endangered Species Act (ESA).

Future Anticipated Trends

- Implementation of the 2003 CCA for Slickspot peppergrass could help ensure the viability of slickspot peppergrass through out the region. The agreement includes conservation measures related to fire management, recreation, invasive non-native plant species, land use authorizations and land exchanges, livestock trampling, and military training. While this is only a voluntary agreement, it increases protection of the species on Federal, State, and private lands. In addition to protecting slickspot peppergrass, populations of other SSP species within the slickspot peppergrass management areas would also benefit.
- While most environmental agencies and regulations protect SSS on Federal and State lands, there are very few mechanisms to protect those communities found on private land. Based on current building trends in the region, it is these private lands that are being developed at the greatest rate. With few restrictions to protect SSP species in these areas, it is likely to see more plant species added to the SSS list in the region.

Cumulative Effects

Special Status Plants: Alternative A

As the population increases within the region, the number of users and type of uses on public, State, private, and other lands is likely to increase appreciably. In many cases, increased users and reduced resource availability would further intensify adverse impacts to upland vegetation (see vegetation above) throughout the region, which is likely to impact SSP species. Adverse impacts associated with increased consumptive uses (agriculture, development, livestock grazing, recreation, and other soil disturbing activities) in and around the NCA could include: increased concentration from livestock and wildlife, altered fire regimes, and increased populations of invasive species and noxious weeds. Based on the current measures taken to protect SSS populations and residual native communities through out the region, current downward trends of are likely to continue or accelerate.

The basic impacts of restoration efforts on SSPs would be as described in the upland vegetation section. Restored areas could potentially provide suitable habitat for sensitive plant species over the long-term as competition from invasive non-native species is eliminated and desirable functional and structural components are restored. As larger areas are restored, the potential for connectivity between individual sensitive species populations increases resulting in a long-term improvement in population and species viability. However, since planning areas outside the NCA have not identified large-scale restoration projects, rehabilitation through ESR projects would be the primary restoration tool; therefore it is unlikely that large continuous habitat would be reestablished to increase connectivity between NCA populations and those outside.

However, there are some beneficial impacts that could result from increased restoration projects associated with adjacent planning areas, as well as incentives for private restoration and increased public awareness of invasive and noxious weeds. In addition, as recrea-

tion needs increase and desirable resources become increasingly limited for public use, the probability of the public becoming more aware of, and more educated on, resource issues would increase. In addition, agricultural lands adjacent to the NCA are being developed into residential and commercial properties. If these trends were to continue, the amount of WUI in and around the NCA would increase; therefore, management practices associated with WUI of public lands, fire suppression, fuels treatments, and stabilization and rehabilitation efforts would likely be enhanced. These efforts, in addition to restoration projects and increased education, could have beneficial cumulative impacts on SSS populations. However, increased rates of development and use of sites in and around the NCA, as well as the increased potential for the introduction of invasive weed or human-caused fires would likely offset those gains unless proactive measures are taken.

Special Status Plants: Alternative B

The overall impacts to SSS from influences outside the NCA would be the same under all alternatives (see above). However, changes in vegetation treatments (restoration, noxious weed, and fuels reduction), livestock grazing, recreation and transportation, IDARNG training, and others (See Chapter 3) would reduce the overall adverse impacts to SSS within the NCA by increasing protective measures for the remaining perennial communities and potentially restoring historically degraded sites. This would not be on a large enough scale to benefit SSPs region-wide and therefore would not contribute to the impacts region-wide.

Special Status Plants: Alternative C

The overall impacts to SSS from influences outside the NCA would be the same under all alternatives (see above). However, appreciable increases in the number of acres of vegetation treatments (restoration, noxious weed, fuels reduction), as well as large-scale reductions in livestock grazing, recreation and transportation, IDARNG training, and others (See Chapter 3), would reduce the overall adverse impacts to SSS within the NCA by appreciably increasing the protective measures for the remaining perennial communities and potentially restoring large areas of historically degraded sites. However the impacts would be mainly within the NCA and would not have a cumulative effect region-wide.

Special Status Plants: Alternative D

The cumulative impacts would be the same as Alternative C.

4.4.6 Soil Resources: Cumulative Impacts

Region of Influence

- Boise District including Owyhee, Bruneau, and Four Rivers Field Offices.

Past and Current Trends

- Soils within the region are particularly susceptible to wind and water erosion, with approximately 75% of soils on BLM/U.S. Forest Service (USFS) lands susceptible to wind erosion (USDA and USDI 1997). Saline soils are prevalent and are susceptible to shrinking and swelling from drying and wetting. Based on the characteristics of the soils within the region, they are highly susceptible to management-induced disturbances (USDA and USDI 1997). Livestock grazing, agriculture, urbanization, and other soil disturbing activities have degraded structural and functional components of soils throughout the region. In addition, the establishment and spread of invasive and noxious weed species have altered vegetative components, which further impact soils. Historic uses have resulted in an adverse overall trend for soils. However, increased management actions and Federal policy changes associated with soil stabilization by State and Federal agencies has reduced the overall rate of decline, and in some cases even reversed it.

Future Anticipated Trends

- Based on regional active stabilization of soils impacted by human uses, the implementation of BMPs, and the increased compliance with Federal and State

laws/regulations regarding watershed health/condition and water quality, localized erosion problems would likely be reduced.

Cumulative Effects

Soil: Alternative A

Impacts on soils can occur through increased loss and alteration of vegetation, as well as long-term affects from changes in grazing, military use, and fire regimes. Adverse cumulative impacts include soil erosion due to loss of vegetation and increased mechanical impacts due to soil disturbance. Conversely, beneficial impacts may result from continued revegetation/reclamation projects and reduced occurrences of fire in reestablishment sites. As restoration efforts within the NCA are underway there would be a reduction in AUMs during the restoration period. This could potentially result in a slight localized increase in soil damage outside of the NCA if the affected permittees transfer these AUMs to their private property. As development expands in the surrounding region of influence there will be an increase in short-term impacts related to surface disturbance and changes in run-off patterns. This activity along with loss of vegetative cover in the NCA will result in slight short-term impacts to the regional soil resource. Long-term conversion of open land to residential and commercial use along with the change from agricultural use to residential there will be reduction in bare ground and subsequent erosion. As the surrounding region develops and the population increases the likelihood of man-cause fires will increase. Fire suppression efforts would focus more resources at protecting life and structures at the expense of natural resources such as native plant communities. This could have the adverse impact of increasing the loss of perennial shrub communities that help to stabilize soils.

Vehicle travel is currently managed according to motorized vehicle area designations throughout the region, and route designations are being completed for the Owyhee, Bruneau and NCA planning areas. These route designations would limit motorized vehicle use, resulting in long-term beneficial impacts. Beneficial impacts would be due to a reduction of disturbance to soils, biological crusts, and the protective vegetative cover. This would also reduce compaction impacts as well. There is an increasing demand for the activity and this use may be displaced to areas that are currently not being used for this activity. This could result in an increase in adverse impacts to soils in those areas.

Continued use of the NCA for military training, livestock grazing, and the continued loss of native vegetation due to fire would result in soil degradation. Although this impact would be moderate within the NCA, it would be a slight contribution to soil impacts on a regional basis. This is particularly true in light of the anticipated upward trend for the region as a whole, resulting from the transition from agriculture to residential use. This transition would reduce the amount of bare land and reduce the size and severity of fires across the region.

Soil: Alternative B

The cumulative impacts would be the same as in Alternative. A.

Soil: Alternative C

The restoration and rehabilitation of up to 230,000 acres would have moderate to high beneficial impacts within the NCA (See Section 4.2.7.) and have a moderate potential beneficial impact to the anticipated upward trend within the region. The loss of grazing opportunity within the NCA could most likely not be accommodated on private lands outside the NCA and therefore would be lost having no cumulative impacts to soils.

Soil: Alternative D

The cumulative impacts would be the same as in Alternative C as a result of vegetation management and the same as Alternative A for livestock grazing and other resource uses.

4.4.7 Upland Vegetation: Cumulative Impacts

Region of Influence

- Boise District Boundary of the BLM, including public, State, private, and other lands within the Owyhee, Bruneau, and Four Rivers Field Offices. Wyoming big sagebrush and salt desert shrub communities in the 7-10" precipitation zone in the Snake River plain, generally less than 4,000 feet in elevation, between Glenns Ferry and the Oregon border. Maintenance or improvement of these communities would ensure the genetic interchange and long-term viability of SSP species that occur in the NCA and the region of influence. These species may be considered the vegetative equivalent of the canary in the coalmine; if they survive and flourish, then the system may be considered functional and healthy.

Past and Current Trends

- Shrub steppe communities, such as Wyoming big sagebrush and salt desert shrub, were historically the dominant upland vegetative communities in the Snake River Valley (Vale 1975; Fremont 1845; Townsend 1839). However, a variety of human activities (i.e., conversion to agricultural or urban uses, livestock grazing, recreation, and the introduction and spread of invasive and noxious weed species) have combined to alter the structural and functional components of these systems. The culmination of these activities has been the augmentation of fuel loads from annual grasses, and the subsequent change in fire regimes, resulting in an enhanced rate of degradation throughout the region. More specifically, the replacement of approximately 50% of native communities with reseeded desirable perennial species or monocultures of annuals since European settlement (Knick 1999). In addition, remnant shrub communities are generally fragmented with understories dominated by annual grass, which increases their risk for fire and conversion to exotic annual dominated communities. While native perennial communities persist within the Snake River Valley, their populations continue to have an overall downward trend.

Future Anticipated Trends

- Future trends associated with: increased awareness and education of shrub steppe ecosystems; proactive fuels and weed management programs; and increased emphasis on rehabilitation and restoration of degraded or disturbed sites to a natural status could slow or reverse current trends in shrub steppe loss. However, based on the current population trends and the need for greater access to natural resources, the overall impact to upland vegetation in the region is likely to increase appreciably; therefore, conservation measures would need to increase at a rate equal to or greater than consumption in order to maintain or improve the condition of remnant shrub steppe communities. If these communities were maintained or improved, the genetic interchange and long-term viability of SSP species that occur throughout the region could also be improved.

Cumulative Effects

Upland Vegetation: Alternative A

As the population increases within the region, the number of users and type of uses on Federal, State, private, and other lands is likely to increase appreciably. In many cases, increased users and reduced resource availability would further intensify adverse impacts to upland vegetation (see above) throughout the region. Adverse impacts associated with increased consumptive uses (development, livestock grazing, recreation, and other soil disturbing activities) in and around the NCA could include the loss of SSP species, increased concentration from livestock and wildlife, altered fire regimes, and increased populations of invasive species and noxious weeds. Based on the current measures taken to protect residual shrub and desirable grass populations, or to restrict use levels throughout the region, current downward trends of upland vegetation are likely to continue or accelerate. In addition, adjacent agricultural practices, including the

application of herbicides and pesticides could adversely impact upland vegetation as well.

However, there are some beneficial impacts that could result from increased restoration projects associated with adjacent planning areas, as well as incentives for private restoration and increased public awareness of invasive and noxious weeds. In addition, agricultural lands adjacent to the NCA are being developed into residential and commercial properties. If these trends were to continue, the amount of WUI in and around the NCA would increase; therefore, management practices associated with WUI of public lands, fire suppression, fuels treatments, and stabilization and rehabilitation efforts would likely be enhanced. These efforts, in addition to restoration projects and increased education, could have beneficial cumulative impacts on upland vegetation. However, increased development and use of sites in and around the NCA, as well as the increased potential for the introduction of invasive weed or human-caused fires would likely offset those gains.

Upland Vegetation: Alternative B

The overall impacts to upland vegetation from influences outside the NCA would be the same under all alternatives (see above). However, changes in vegetation treatments (restoration, noxious weed, and fuels reduction), livestock grazing, recreation and transportation, IDARNG training, and others (See Chapter 3) would reduce the overall adverse impacts to upland vegetation within the NCA by increasing protective measures for the remaining perennial communities and potentially restoring historically degraded sites. Therefore, cumulative impacts would be more beneficial than Alternative A.

Upland Vegetation: Alternative C

The overall impacts to upland vegetation from influences outside the NCA would be the same under all alternatives (see above). However, changes in vegetation treatments (restoration, noxious weed, and fuels reduction), livestock grazing, recreation and transportation, IDARNG training, and others (See Chapter 3) would reduce the overall adverse impacts to upland vegetation within the NCA. This might result in some localized expansion of shrub communities into degraded areas outside of the NCA by appreciably increasing the protective measures for the remaining perennial communities and potentially restoring large areas of historically degraded sites. Therefore, cumulative impacts under alternative C would be the most beneficial for upland vegetation. The result would be there is no adverse cumulative impact and the benefits would be restricted to the NCA.

Upland Vegetation: Alternative D

The overall impacts to upland vegetation from influences outside the NCA would be the same under all alternatives (see above). The cumulative impacts would be the same as Alternative C.

4.4.8 Water Quality, Riparian, and Wetlands: Cumulative Impacts

Region of Influence

- Surface water encounters different management as it flows over the landscape and through parcels of diverse ownership. Cumulative affects will be analyzed in terms of 4th field hydrologic units. A hydrologic unit is one of a nested series of numbered and named watersheds arising from a national standardization of watershed delineation. Idaho Department of Environmental Quality (DEQ) frequently uses the fourth level of this delineation, commonly called sub basins when writing total maximum daily loads (TMDL). This analysis considers impacts to three units collectively: the Mid-Snake/Succor Unit (#17050103), the Lower Boise Unit (#17050114), and the C.J. Strike Unit (#17050101). When viewed together, these areas form a large contiguous area that encompasses the NCA and areas outside the NCA where cumulative effects may/have logically occur(ed). These collective hydrologic units will be referred to as the "zone of impact" for the purposes of this cumulative effects analysis.

Past and Current Trends

- One indication of water quality is pollutant load. Total maximum daily loads (TMDL) of pollutants in waters on Federal, State, and tribal lands have been developed and are published every two years by the DEQ and approved by the U.S. Environmental Protection Agency (EPA). A TMDL is an estimation of the maximum pollutant amount that can be present in a water body and still allow that water body to meet water quality standards. TMDL are water body and pollutant-specific. TMDL trends for the Snake River have been relatively static over the last 10 years, in terms of sediment and dissolved oxygen problems. This is largely due to diversion and flow alteration (Pers. Comm. Pam Smolczynski 2005).
- Projects that take place on the Snake River, upstream of the NCA may affect water quality and riparian vegetation within the NCA. On the Snake River, flow alteration and diversions have altered the quality of water and riparian vegetation in the NCA over the last 100 years. Impoundments increase water temperatures and reduce dissolved oxygen content resulting in adverse effects to water quality. Agricultural practices adjacent to water bodies deliver increased amounts of sediment and other pollutants from runoff. These practices have adversely impacted the waters of the Snake River during the last century and continue today.
- Impoundments increase water temperatures and reduce dissolved oxygen content resulting in adverse effects to water quality. Agricultural practices adjacent to water bodies deliver increased amounts of sediment and other pollutants from runoff. These practices have adversely impacted the waters of the Snake River during the last century and continue today.
- Existing water quality programs for non-point source pollutant reductions are available for private landholders In Ada, Owyhee, Canyon, and Elmore Counties, cooperators may make improvements on their own or seek cost-share funds from one of one of the many programs available. Most of the agricultural programs are either State or federally funded through the Idaho Soil Conservation Commission (ISCC) or the Natural Resource Conservation Service (NRCS). These programs are targeted at the agricultural community to assist with conservation practices. For example, the Owyhee Soil Conservation District (SCD) and the Canyon SCD have Water Quality Program for agriculture money available to address on-the-farm pollutant reductions although Canyon SCD has not yet had any State or Federal project areas in the Mid Snake River/Succor Creek watershed. Other State and Federal funding sources include the State §319 grant program, the Resource Conservation and Rangeland Development Program, the USDA Environmental Quality Incentive Program, the Wildlife Habitat Incentives Program, and IDWR agricultural loans. Participation from local operators is voluntary.
- Programs developed by the State of Idaho Soil Conservation Commission (SCC) are available to protect and enhance the quality of water in Idaho. The Water Quality Program for Agriculture (WQPA) was created to protect and enhance the quality and value of Idaho waters by controlling and abating water pollution from agricultural non-point sources.
- The State of Idaho uses a voluntary approach to address agricultural non-point pollution sources. However, regulatory authority can be found in the water quality standards (IDAPA 58.01.02.350.01 through 58.01.02.350.03). IDAPA 58.01.02.054.07 refers to the Idaho Agricultural Pollution Abatement Plan (Ag Plan), which provides guidance to the agricultural community and includes a list of approved BMPs (IDHW and SCC 1993). A portion of the Ag Plan outlines responsible agencies or elected groups (Soil Conservation Districts) that will take the lead if non-point source pollution problems need to be addressed.

- All riparian areas and water bodies on BLM land within the region will be managed to meet or exceed State of Idaho water quality standards. This management will have benefits to water quality and riparian functioning condition throughout the region. The condition of riparian areas on BLM land within the region has been assessed (USDI 1999). Table Water Quality 4.1 shows a representative number of these streams.

Water Quality Table 4.1. Representative Functioning Condition Ratings on BLM Stream Miles Outside of the NCA, but within the Region.

Stream Name	Miles Rated in PFC	Miles Rated Not in PFC
Hardtrigger Creek	0	8
Jump Creek	3	2
McBride Creek	0	3
Pickett Creek	0	5

SOURCE: USDI 1999

Future Anticipated Trends

- Population growth and development of the area will increase over the life of the plan. The demand for water will increase correspondingly. Pumping from wells drilled into the Snake River Aquifer will likely increase. The effects of increased pumping from the Aquifer would depend on the degree of pumping and are unknown at this time.
- The Biological Opinion that addressed grazing impacts to Idaho springsnail habitat resulted in grazing restrictions along the Snake River, and tributaries. Riparian vegetation would likely benefit from these restrictions.

Cumulative Effects

Water Quality, Riparian, and Wetlands: Alternative A

Adverse regional impacts to riparian vegetation under Alternative A would be significant in areas of the Lower Boise Sub-basin due to population growth and development. Adverse impacts from development will be only marginal for the Middle Snake/Succor Sub-basin.Surface disturbing activities within the region would create potential habitat for noxious weeds. Water quality would not be improved region-wide by replacing agricultural lands with residential and commercial development because run-off from these developed proper-ties contains pesticides, petroleum products, and other pollutants that are not normally treated, and therefore enter the affected water bodies. The limited number of riparian areas and slight impacts of management actions on riparian areas within the NCA would not appreciably contribute to cumulative impacts in the region

Water Quality, Riparian, and Wetlands: Alternative B

Impacts from population growth and development will be identical to those described under Alternative A. Restoration of riparian areas within the NCA for wildlife would not have cumulative impacts that affect the larger region.

Water Quality, Riparian, and Wetlands: Alternative C

Impacts from population growth and development would be the same as those described under Alternative A. Livestock grazing on private, State, or Federal land surrounding the NCA could increase as a result of elimination of grazing. Riparian pastures that receive elevated grazing pressure could be adversely affected. Water quality could also be reduced on site-specific areas in these pastures outside of the NCA. Improvements to riparian areas within the NCA would have beneficial impacts within the region, but these impacts would not be significant enough to off-set the regional adverse impacts.

Water Quality, Riparian, and Wetlands: Alternative D

Adverse impacts associated with population growth and development would be the same as those described under Alternative A. Man-

agement actions identified in this alternative would not contribute to the adverse regional impacts.

4.4.9 Visual Resources: Cumulative Impacts

Region of Influence

- The region will include Canyon, Ada, Owyhee (northern), and Elmore counties.

Past and Current Trends

- The Snake River Plain in the area is characterized by rolling hills of sagebrush and grasslands with very few trees. The project area is generally surrounded by open space with a few areas of development. Ada and Canyon counties have the most development while Owyhee and Elmore counties have the least. While the majority of the landscape is open, past developments have transformed parts of the viewshed from open space with expansive views, to a somewhat developed suburban landscape. Agricultural fields are a common feature within the region, resulting in a change in the color and texture of the landscape while retaining the expansive quality.
- Past projects associated with the Snake River include bridges, impoundments, roads, and homes. In Elmore County, C.J. Strike Dam has turned the valley of the confluence of the Bruneau and Snake Rivers into a reservoir. In Ada County, Swan Falls Dam is visible from the Canyon. As the Snake River enters Canyon County, the character of the landscape becomes less rugged. It remains open, but changes to more of an agricultural setting where irrigated fields are common.

Future Anticipated Trends

- Development around urban and suburban areas is expected to continue during the life of the plan. Development would likely occur around areas that have been developed in the past and extend outward. The highest amount of growth is projected in Ada and Canyon counties. Impacts on visual resources would result as land use patterns change in these counties from agricultural to residential. Homes and subdivisions will be built, along with associated roads and other infrastructure.

Cumulative Effects

Visual Resources: Alternative A

Visual resources within the region would be adversely impacted by development and population growth. The alternative does not designate additional utility corridors within the NCA. Utility companies may be forced to route corridors around the NCA making impacts to visual resources more apparent elsewhere should the existing corridor not meet the future needs of the region. This could have a slight adverse contribution to the overall cumulative impacts in the region.

Visual Resources: Alternative B

Visual resources within the region would be affected by population growth and development as stated in Alternative A. The designation of an additional utility corridor under this alternative could have beneficial cumulative effects overall, if the corridor would reduce the overall length necessary for a transmission line. There would be no appreciable cumulative impacts to visual resources.

Visual Resources: Alternative C

Visual resources within the region would be affected by population growth and development as stated in Alternative A. Aggressive restoration efforts within the NCA may have beneficial cumulative effects if these efforts coincided with restoration of neighboring lands (i.e., private, State, etc.). No restoration projects on neighboring lands are known at this time. The additional utility corridor proposed in this alternative would have cumulative impacts the same as Alternative B. Livestock grazing would be eliminated within the NCA. Livestock operators may seek forage elsewhere within the region which would likely result in slight, localized adverse impacts to visual quality. There would be no ap-

preciable cumulative impacts to visual resources.

Visual Resources: Alternative D

Visual resources within the region would be affected by population growth and development as stated in Alternative A. Aggressive restoration efforts would have impacts identical to those mentioned in Alternative C. Utility corridor designation within the NCA would have impacts identical to those described under Alternative A. There would be no appreciable cumulative impacts to visual resources.

4.4.10 Idaho Army National Guard: CumulativeImpacts

Military training activities would neither be significantly affected by, nor from non-military activities region-wide.

The IDARNG has facilities in 26 Idaho communities. Given the dispersed nature of IDARNG employment, communities throughout the state would probably not be adversely affected by the relatively small loss of OTA training capability reflected in the preferred alternative.

4.4.11 Lands and Realty: Cumulative Impacts

Region of Influence

- The area considered in this analysis includes Ada County, Canyon County, Elmore County, and northern Owyhee County.

Past and Current Trends

- The number of land use authorizations, particularly rights-of-way and permits, has been a function of demand for these uses.

Future Anticipated Trends

- In response to population trends, increased development would result in increased needs for access roads and utility infrastructure on Federal, State, and private lands, which would increase the need for rights-of-way, easements, etc. to construct those facilities. Large-scale land ownership consolidation, as would occur through a major land exchange between BLM and the State of Idaho, would affect land use in the affected areas, since land use regulations and management objectives and requirements differ between agencies.

Cumulative Effects

Lands and Realty: Alternative A

Requests for easements and rights of way would increase across the region of influence as development and resource user demands increase; however, the overall environmental impacts would be slight. The cumulative economic impact of easements and rights-of-way could be significant when one considers the extent to which development and use depends on the existence of road and utility easements and related infrastructure. Over the long-term, land consolidation could reduce the amount of easement and ROW requests, but would have slight to negligible impacts region-wide. This alternative has the smallest avoidance area, which would have negligible impacts region-wide.

Lands and Realty: Alternative B

Same as Alternative A.

Lands and Realty: Alternative C

Easements, rights-of-way and land consolidation would have the same impacts as described under Alternative A. The proposed boundary change would have beneficial, but negligible impacts region-wide.

Lands and Realty: Alternative D

Easements, rights-of-way and land consolidation would have the same impacts as described under Alternative A. The proposed NCA boundary change would have the same impacts as described under Alternative C.

4.4.12 Livestock Grazing: Cumulative Impacts

Region of Influence

- Boise District Boundary

Past and Current Trends

- Livestock grazing has been present in and around the NCA since as early as 1836 (Gibbs 1976). Mismanagement, over use, and drought conditions caused range conditions to degrade in the early part of the century (Yensen 1982; Joyce 1989). However, increased range management and incorporation of grazing systems have improved range conditions over time (Joyce 1989). Within the region, the bulk of livestock grazing occurs on public lands; however, grazing is also present on State and private lands.

Future Anticipated Trends

- Population trends and the associated need for residential, commercial, and industrial property development are expected to increase over the life of the plan. As land development increases, impacts to vegetation, other resources, and recreation increase. The Owyhee RMP reduced the overall number of available AUMs by approximately 29,000 (USDI 1999b). Other decisions in the region related to sensitive resources (i.e., SSPs and animals) have had similar effects of reducing AUMs or adjusting seasons/durations of use in compliance with Idaho S&Gs. As public needs shift and resource use increases, conflicts between livestock grazing and human development/use will increase. Long-term, increasing conflicts are likely to result in more intensive livestock grazing management and overall AUM reductions regionwide. In addition, livestock operators on private lands are not required to comply with Federal or State BMPs for protecting and enhancing riparian areas and water quality.

Cumulative Effects

Livestock Grazing: Alternative A

The overall regional impacts to livestock grazing would be the same under all alternatives. As more private lands in the region are developed for residential, commercial, and industrial purposes, and as dispersed recreation becomes more pervasive across the landscape, the land available for livestock grazing is reduced, and interactions between livestock and other human uses increase. Current grazing management would not contribute to the cumulative impacts to regional grazing management.

Livestock Grazing: Alternative B

The overall regional impacts to livestock grazing would be the same as Alternative A. However, there would be a short-term loss of up to 4,400 (15%) actual use AUMs as a result of post-treatment rest and deferment periods following habitat restoration and rehabilitation projects. Improvements in rangeland health would result in long-term beneficial effects of increased and more stable forage production.

Livestock Grazing: Alternative C

The overall regional impacts to livestock grazing would be the same as Alternative A. When combined with outside influences, the cumulative impacts of complete exclusion of livestock from the NCA would be extremely adverse for livestock grazing.

Livestock Grazing: Alternative D

The overall regional impacts to livestock grazing would be the same as Alternative A. This alternative would result in a short-term loss of grazing during restoration as a result of post-treatment rest and deferment periods. The loss of grazing would not be large enough to have appreciable impacts on the region.

4.4.13 Mineral Resources: Cumulative Impacts

Region of Influence

- This cumulative effects analysis will account for impacts within a specific region of influence, which includes Ada, Canyon, Elmore, and northern Owyhee counties.

Past and Current Trends

- The NCA-enabling legislation withdrew the NCA from hard-rock mineral location and oil and gas and geothermal leasing. It does allow the disposal of mineral materi-

als (sand, gravel, rock, clay, and building stone) from existing mineral material sites. However, it does not allow the establishment of new mineral material sites. Meanwhile, mineral material demands have increased in the region of influence to meet the needs of road, residential, and commercial construction associated with the increased regional population.

Future Anticipated Trends

- Development of commercial and residential properties will continue within the region of influence. Substantial utilization of available mineral material resources from public and private sources within and outside of the NCA would continue. Limitations on mineral material extraction within the NCA could put additional demand for mineral materials on private sources, as well as other agencies that provide minerals programs, such as the State of Idaho or USFS.

Cumulative Effects

Minerals: Alternative A

No effects.

Minerals: Alternative B

No effects.

Minerals: Alternatives C and D

Alternatives C and D propose NCA boundary changes that could impact the opportunity to create new mineral extraction sites on public lands that would be included within the new boundary. Conversely, public lands that are excluded from the NCA through a boundary change could be available for the establishment of new mineral material sites. As the surrounding region is developed there could be an increased demand for sand and gravel. Limitations on mineral material sites could have a negligible cumulative impact on the local availability of these materials.

4.4.14 Recreation: Cumulative Impacts

Region of Influence

- No definitive boundary was used to analyze the region of influence for recreation. The top two destination counties in Idaho are Ada and Canyon, which are adjacent to the NCA and represent the largest influence for cumulative impacts. It is assumed that most recreation users come from population bases surrounding the NCA.

Past and Current Trends

- The 2003-2007 Idaho Statewide Comprehensive Outdoor Recreation and Tourism Plan (Idaho SCORTP) determined that outdoor recreation is on the rise in Idaho, and support for recreation education is very strong.
- As population growth increases in the area surrounding the NCA, recreation use increases. The latest census ranked Idaho population growth as 4th in the nation. Most of the population growth has been focused around urban centers. Public lands adjacent to growing population centers will logically experience greater adverse impacts from increased recreation demands and conflicts caused by increased pressure on limited natural resources.
- The route designation process that will be conducted in the NCA, Bruneau, and Owyhee field offices will have long-term direct beneficial impacts to the region by helping to meet public demand for motorized vehicle activities in a manner that provides for public health and safety, minimizes user conflicts, and reduces associated resource damage.

Future Anticipated Trends

- Population growth projections to 2025 in the Ada County area are from 13% in Kuna to 15-21% in southeast and southwest Ada County. Southeast and southwest rural Ada County is projected to grow by 225% and 693%, respectively, by the year 2025. These extreme growth areas in Ada County are the closest popula-

tion areas to the NCA, and would impact recreation levels region-wide.

Cumulative Effects

Recreation: All Alternatives

Continued population increase in the Treasure Valley area is expected to lead to an increase in recreational use in and around the NCA. As recreation use increases, so will the demand for diverse recreational opportunities. In many cases, increased numbers of users reduce overall resource availability, which further intensifies recreation conflicts throughout the region. The route designation process will have the same impacts described above under all alternatives.

Restoration, fire, and fuels management have the potential to have beneficial and adverse slight impacts to recreation within the region depending on the number of acres restored, burned, or treated and the areas that may be closed as a result. These impacts would generally be short-term.

Recreation: Alternative A

Long-term recreation demands would not be met in the NCA, forcing the public to recreate elsewhere in the region. This alternative allows for maintenance and expansion of existing facilities, but no new recreational developments, which would not likely accommodate the expected increase in recreational use due to growing population. Restoration activities in the NCA would be the least under this alternative. Over the long-term, this would result in the least improvements to the quality of recreation experiences. There would be a slight adverse cumulative impact over the long-term to the quality of recreation by the lack of facility development.

Recreation: Alternative B

The overall acres for roaded natural recreation opportunities would decline; however, this would result in an increase in acreage for semi-primitive non-motorized opportunities. This alternative allows for developments of two new recreation facilities and existing sites would be maintained and in some cases expanded, which would accommodate some of the increase in recreational use due to growing population. The short-term closure of habitat restoration areas to recreation use in the NCA could increase recreation pressure outside of the NCA, and could also result in long-term improvements to the quality of recreation experiences within the NCA. The reduction in roads, when considered with the increase in demand for motorized vehicle opportunities, could contribute to the regional cumulative loss of recreation opportunities.

Recreation: Alternative C

The acres for roaded natural recreation opportunities would decline the most under this alternative; however, this would result in an increase in acreage for semi-primitive non-motorized opportunities. One of the largest increases in recreation is in motorized vehicle use. This would not meet the demand and would result in displacement of the activity to other areas within the region, resulting in a slight adverse cumulative impact. This alternative allows for the development of up to four new recreation facilities, and existing sites would be maintained and in some cases expanded, which would accommodate some of the expected increase in recreational use due to growing population.

Recreation: Alternative D

The acres for roaded natural recreation opportunities would decline slightly; however, this would result in an increase in acreage for semi-primitive non-motorized opportunities. This alternative allows for the most new developments of recreation facilities and existing sites would be maintained and in some cases expanded, which would accommodate the expected increase in recreational use due to growing population. The impact of short-term closures of habitat restoration areas would be the same as Alternative B, but the effect would be greater due to more acres being treated. There would be no more than a negligible adverse cumulative impact.

4.4.15 Transportation: Cumulative Impacts

Region of Influence

- No definitive boundary was used to analyze the region of influence for transportation. The top two destination counties in Idaho are Ada and Canyon, which are adjacent to the NCA and represent the largest influence for cumulative impacts. It is assumed that most motorized vehicle users come from population bases surrounding the NCA.

Past and Current Trends

- The 2003-2007 Idaho Statewide Comprehensive Outdoor Recreation and Tourism Plan (Idaho SCORTP) determined that outdoor recreation is on the rise in Idaho and support for recreation education is very strong.
- As population growth increases in the area surrounding the NCA, recreational use of motorized vehicles increases. The latest census ranked Idaho fourth in the nation for population growth. Lands located adjacent to rapidly expanding population centers will logically experience higher levels of resource pressure and adverse impacts resulting from increased demands for ORV-related recreation.
- Currently, a route designation process is being conducted in the NCA, Bruneau, and Owyhee Field Offices in an attempt to reduce the affects from motorized vehicle use on natural resources, including upland vegetation. Route designation on other lands in the region has been a low priority and is primarily conducted in conjunction with efforts on surrounding public lands. However, State and other Federal agencies are starting to restrict unlimited ORV use, adopting designated route systems, or eliminating ORV use altogether, which could add to impacts in areas of concentrated use. Based on the continued population increases in the region, conflicts between ORV users and other recreation users are likely to continue at current or greater levels in these areas. Route designations in the Bruneau, Owyhee, and NCA could initiate or accelerate route designations on State and other land ownerships, which would reduce impacts associated with ORV use region-wide.
- Depending on their size and location, habitat restoration and fuels treatment projects in the region could have a short-term impact on the transportation network. Some, if not all routes located in areas undergoing restoration or fuels treatment-could be closed to public access for periods varying from a few to many years in order to allow successful restoration.

Future Anticipated Trends

- A continued increase in population within the Treasure Valley area would lead to an increase in recreational motorized vehicle use in the NCA. As ORV use increases, so will the demand for routes.

Cumulative Effects

Transportation: All Alternatives

Although the cumulative impacts to transportation from the route designation process will be unknown until the process is completed, it would generally benefit transportation management by designating routes as open, limited, or closed to help meet public demand for motorized vehicle activities, protecting natural resources, providing for public health and safety, and minimizing conflicts between user groups. The closure of some areas that are currently used for open motorized vehicle activities would have slight cumulative impacts regionally by displacing the activity to other areas. Overall the USFS and State Parks have begun to develop route designation processes, which could further limit opportunities in the region for cross country ORV use. Since ORV use is currently not authorized in the NCA, the limited amount of area used for open motorized vehicle use within the NCA would have a slight contribution to this cumulative impact.

None of the Alternatives propose closing major access routes and therefore there would be no cumulative impact to regional access needs.

4.4.16 Utility and Communication Corridors (Land Use Authorizations): Cumulative Impacts

(See Lands and Realty Section 4.4.10).

4.4.17 Wildland Fire Ecology and Management: Cumulative Impacts

(See Upland Vegetation Section 4.4.6).

4.4.18 Social and Economic Conditions: Cumulative Impacts

Region of Influence

- The region of influence considered in this cumulative impact analysis includes four counties: Ada, Elmore, Canyon, and northern Owyhee.

Past and Current Trends

- Social and economic trends in the region of influence have changed dramatically during the last 15 years. Populations in Ada and Canyon counties in particular, have increased (see General Discussion of Regional Influences section) due largely to migration from areas outside the region of influence. Private sector investment opportunities have increased, leading to a corresponding influx of investment dollars from outside the area.
- Subdivision and rezoning has influenced social and economic conditions within the region of influence during the last 15 years. Land use patterns continue to change resulting in corresponding changes to the regional economy. The demand for housing and business properties has increased, resulting in many agricultural properties being transformed into residential and commercial use.

Future Anticipated Trends

- The primary driver of past and current trends is population growth. The rate of population growth is expected to increase within the region of influence during the next 20 years.
- The growth rate for this area has been averaging around 45% over a 10-year period and is expected to continue.

Cumulative Effects

Economics: Alternative A

Increases in population and development would continue and the economy would diversify correspondingly. Rapid population growth will be accompanied by increased pressure to develop land. Most of the NCA is adjacent to private land, and some of the private land that abuts the NCA may be developed for housing or rural residential acreage. Development of land adjacent to the NCA combined with rapid population growth may also undermine the traditional cultural patterns (i.e., ranching, and farming) and rural lifestyle of gateway communities to the NCA. Continued increases in real estate values will likely accompany the rapid population growth. Current real estate prices in most of Southwest Idaho make it financially unprofitable to purchase land for ranch expansion. Continued real estate price increases will put pressure on ranching operations to sell out to developers.

Adverse impacts resulting from a failure to meet user demands for recreational facilities would be negligible due to the numerous sectors of spending associated with the region of influence. Military spending and livestock grazing would continue at current levels. Overall, the cumulative effect of the alternative would be negligible.

Economics: Alternative B

The change in the OTA training area and associated loss of jobs would result in a slight adverse impact over the long-term; however, this adverse impact would be easily overshadowed by regional growth and economic development.

Livestock grazing actual use would be reduced by roughly 15% over the short-term potentially resulting in slight adverse impacts. Development of surrounding areas would have a much greater impact on the historic custom and culture than changes resulting from NCA management. The negligible adverse impacts to the economy would be off-set by growth in other sectors. Recreation management would result in beneficial impacts within the region

due to the creation of SRMAs and possible W&SR designations; however, the impact would be negligible.

Economics: Alternative C

Adverse impacts related to reductions in military spending within the region of influence would be slight over the short-term and negligible over the long-term. Adverse impacts from reductions in staffing would be offset over the long-term as the expanding population continued to grow the economy. There could be negligible adverse impacts to IDARNG units outside the region of influence.

The elimination of grazing in the NCA would have slight adverse economic impacts within the region. As operators reduce herd size or shift their herds to secondary pastures outside the NCA, a lag-time in production and earnings could be expected. Reductions in livestock grazing coupled with the loss of lands to development would result in greater impacts to custom and culture than in Alternatives A, B or D. Because the market rate for AUMs is not reflected in the BLM pricing, operator spending for forage would either increase, or be eliminated through herd reductions.

As land use patterns change in the area, so will perceptions of the social condition within the Boise-Nampa-Caldwell area (i.e., the Treasure Valley). Cumulatively, the area may be perceived as less appropriate for agricultural activities. This perception may exist already exists to a certain extent in the Region where urbanization is occurring resulting in pressure to the ranching industry. This shift in the perception will likely be accompanied by a gradual shift in the demographic makeup and socio-economic status of the region.

Intensive management of recreation would have slight beneficial impacts to the region. As population increases and open space decreases, demand for recreation in remaining open spaces will also increase.

Economics: Alternative D

Military spending within the region would be adversely impacted due to a decrease in employment associated with the OTA. The type of cumulative impacts would be the same as described under Alternative C; however, the degree of impact would be negligible.

The short-term reductions in AUMs associated with restoration would result in negligible adverse economic impacts to the region. Social and economic impacts would be the same as described in Alternative B.

Region-wide impacts from recreation would be negligible. Social impacts would be the same as described under Alternative C; however there would be slightly more opportunities for motorized recreation.

4.5 SUMMARY OF CUMULATIVE IMPACTS

Alternative A has the potential to cumulatively affect the following resources and resource uses at a moderate level when combined with other actions and trends within a greater region of influence: upland and riparian vegetation, soils, water quality, cultural resources, and wildlife habitat. Population growth and change from agricultural use to residential development along with the continued loss of native vegetation within the NCA would result in loss of habitat for raptors and their prey as well as other wildlife, an increase in human-caused fires, and the associated loss in native vegetation, could result in the potential for increases in soil erosion. The NCA contribution to these overall cumulative impacts would be moderate.

Alternative B would increase vegetation treatments, reduce loss of vegetation and increase management activities to accommodate use of the NCA relative to Alternative A, resulting in a slight adverse overall cumulative impact.

Alternative C has the highest level of vegetation treatments and protection of natural resources and would not contribute to regional

habitat loss. Successful restoration efforts would meet the needs of raptors and their prey and help off-set the regional loss of habitat. There would be negligible regional adverse cumulative impacts from reductions in livestock grazing and IDARNG activities; however, these would be off-set by negligible to slight beneficial cumulative impacts based on recreation, vegetation treatments, wildlife habitat improvement, and general economic growth.

Alternative D has the same level of vegetation treatment as Alternative C and also provides a high level of protection of natural resources and would not contribute to regional habitat loss. Successful restoration efforts would meet the needs of raptors and their prey and help off-set the regional loss of habitat. There would be no regional adverse cumulative impacts. However, there would be slight beneficial cumulative impacts based on recreation, vegetation treatments, wildlife habitat improvement, and general economic growth.

4.6 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA requires a discussion of any irreversible or irretrievable commitments of resources, which would result from an implemented proposal. An irreversible resource commitment is final and cannot be changed (e.g., the extinction of a species or destruction of cultural resource values). An irretrievable resource commitment is one in which the resource or its use is lost for a period of time (e.g., dedication of an area to military maneuver training). Implementation of any of the alternatives would result in surface disturbing activities, including livestock grazing, military training, dispersed recreation, facility development, fuels management, and habitat restoration. These surface-disturbing activities would alter soil structure, remove vegetation, and potentially damage cultural resources. In some cases, these impacts would be permanent. Raptor and raptor prey populations that are dependent on the affected habitats could be displaced and the stability of their populations could be affected. However, management actions prescribed under Alternatives B, C, and D are intended to reduce the impacts to raptor and raptor prey populations and restore soil, vegetation and associated wildlife habitat. Facility construction and some military training activities, such as off-road maneuver training would result in additional irretrievable loss of habitat.

Irretrievable resource commitments center mainly on IDARNG areas designated for off-road training and fuels management projects that remove or limit expansion of shrubs. In military off-road maneuver training areas, opportunities for habitat restoration would be precluded as long as the areas are used for that purpose. Because of this, BLM plans no habitat restoration in the OTA under any of the alternatives. Under Alternative B, an additional 20,400 acres would be dedicated to military maneuver training to replace off-road restrictions placed on 22,300 acres. Under Alternative C, 3,900 acres would be removed from the OTA; and under Alternative D, there would be a 4,100-acre increase to mitigate the off-road restrictions placed on 22,300 acres. A portion of the 4,100 acres would be designated for off-road maneuvers and thus the impacts would be irretrievable so long as used for that purpose. The training area is critical to meeting IDARNG training requirements, which help to achieve State and National military objectives and contribute to the local economy. As such, there would be no reasonable expectation that the IDARNG need for maneuver training areas would reduce over the long-term or increase over the short-term.

Fuels projects involve maintaining the 136 miles of fuel breaks under Alternative A, 144 miles under Alternative B, and 148 miles under Alternatives C and D. This results in a loss of perennial habitat within the fuel breaks and could contribute to fragmentation of small mammal habitat. The decrease in the size and severity of fires in perennial vegetation communities resulting from fuel breaks would have a greater benefit for wildlife than the loss of habitat reflected in the fuel breaks themselves.

The authorization and use of mineral material sites represent an irreversible commitment of resources ranging from 496 to 693 acres, depending on the alternative. These sites represent a loss of habitat values and reduced wildlife carrying capacity. Recreation facilities, including the transportation network would also represent an irretrievable impact. Alternative A would have the greatest number of routes with Alternatives B and D having reduced numbers of routes and Alternative C having the least.

4.7 UNAVOIDABLE ADVERSE IMPACTS

Section 102 (C) of NEPA requires disclosure of any adverse environmental effects that cannot be avoided following implementation of a proposal. Unavoidable adverse impacts are those that remain following the implementation of mitigation measures or impacts for which no mitigation measures exist. Some unavoidable adverse impacts would occur as a result of RMP implementation. Others are a result of public use of lands within the NCA.

Surface disturbing activities would cause localized unavoidable impacts. Although these impacts would be mitigated to the extent possible, unavoidable damage is inevitable. The constructions of recreation or military facilities would reduce the amount of native vegetation available for wildlife. Although these impacts are unavoidable, they would be concentrated in generally localized areas previously disturbed by fire. By managing these uses there would be a reduction in the spread of impacts to other areas, in particular to intact native shrub communities that have the highest value for raptor and raptor prey populations. The greatest unavoidable adverse impact would result from habitat fragmentation due to the inability to restore non-shrub areas in designated maneuver training areas of the OTA.

In some circumstances, the loss of sagebrush steppe habitat either by direct disruption or by the spread of noxious weeds or other invasive species would be irreversible. In other instances, reversing the loss of habitat would take many years to complete, thus irreversibly affecting wildlife that depend on these habitats.

Inadvertent damage to or loss of cultural resources from increased visitation and surface disturbing and disruptive activities is unavoidable. Although mitigation measures could be implemented for scientific data recovery, the impacts to the area during rehabilitation, restoration and facility development could not be mitigated. The number of sites that could be inadvertently damaged is unknown, but the likelihood of damage or disturbance is directly proportional to the acreage affected.

Conflicts between user types, such as individuals who seek more primitive types of recreation and motorized vehicle users who share recreational areas, are unavoidable adverse impacts. Although attempts are made to provide for a variety of recreational uses, as recreation demand increases, recreational use would disperse to other areas of the NCA, which could create conflicts with previous uses of those areas.

Numerous land use restrictions imposed throughout the NCA to protect sensitive resources and other important values, by their nature, would impact the ability of permittees, individuals, and groups who use the public lands to do so freely without limitations. Although attempts are made to minimize these impacts by limiting the protection level necessary to accomplish management objectives and by providing alternative use areas for impacted activities, unavoidable adverse impacts would occur.

4.8 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

Section 102(C) of NEPA requires discussion of the relationship between local, short-term uses of mans environment and the maintenance and enhancement of long-term productivity of resources. As discussed in the introduction to this chapter (4.1) short term impacts are those changes that are caused by ground-

disturbing activities that generally revert to pre-disturbed conditions within a few years. Long-term impacts persist beyond a few years.

Under all alternatives, short-term disturbances of soils, vegetation, wildlife habitat, and possibly visitor enjoyment of the NCA from vegetation treatments and facility construction would be more than offset by the long-term productivity of the restored sagebrush-steppe habitat and the enhanced facilities available for visitor use. This would be particularly true for Alternatives C and D, with their greater emphasis on long-term restoration of habitat. Management actions to improve soil, water, riparian, vegetation, and habitat resources would improve the productivity of wildlife and SSS habitats throughout the NCA. These activities are directed toward achieving long-term improvement in ecosystem productivity to meet the needs of raptor and raptor prey populations.

Long-term impacts to soil structure and vegetation would occur in areas where concentrated recreational use is directed and where off-road military training activities occur. However, concentrating recreational use to certain areas would limit the adverse impacts from extending to other areas of the NCA. In addition, limiting military off-road vehicle maneuver training to areas with less than 10% shrub canopy cover would limit long-term impacts to shrub communities in the OTA, but would ensure that non-shrub areas would continue to incur long-term soil and vegetation disturbance from off-road military activities.